



**IndustrialPro™ and MobilityPro™  
Gateway Wireless Modems**

BT Series Firmware Release Notes  
Version 3.8.16 / 3.9.3

June 2013

# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

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### 1 Related Products

This release applies to the following products:

- Legacy Industrial Wireless Modems (BT-4X00 / BT-5X00 Series):
  - CDMA 1xRTT: BT-4200, BT-5200
  - GSM/GPRS: BT-4400, BT-5400
  - CDMA EvDO: BT-4600, BT-4600A, BT-5600, BT-5600A
  - CDMA EvDO A: BT-4600A, BT-5600A
- **IndustrialPro™ Gateway** wireless modems (BT-6X00 Series):
  - GSM/EDGE: BT-6401, BT-6401EB, BT-6421
  - CDMA EvDO A: BT-6600, BT-6601, BT-6601EB, BT-6621
  - GSM/HSPA: BT-6800, BT-6801, BT-6801EB, BT-6821
- **MobilityPro™ Gateway** wireless modems with GPS (BT-5X00v2 Series):
  - CDMA EvDO A with GPS: BT-5600v2
  - GSM/HSPA with GPS: BT-5800v2
- **MobilityPro™ Gateway** wireless modems with GPS and Wi-Fi (BT-5X30v2 Series):
  - CDMA EvDO A with GPS and Wi-Fi: BT-5630v2
  - GSM/HSPA with GPS and Wi-Fi: BT-5830v2



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## 2 Upgrade Instructions

Table 1, below, provides a summary of the update procedure to follow depending on the firmware which currently resides in the modem (i.e. is being upgraded from).

Model	Normal update	Advanced update required	Advanced update for IPSec support <sup>1</sup>
BT-4000 or BT-5000 series	>= 3.x	<= 2.x	N/A
BT-6000 or BT-5000v2 series	>= 3.6.0	<= 3.4.9	<= 3.6.1

Table 1 - Upgrade Process Matrix

### 2.1 Normal Update

*\*When upgrading from 3.9.1 on the Wi-Fi units you must use the Advanced Update procedure for the initial update from 3.9.1.*

1. Use an Ethernet crossover cable (BT-4000/BT-5000), an Ethernet straight or crossover cable (BT-6000/BT-5000v2) or USB cable to connect modem and PC
2. Start BlueVue Device Manager (BVDM) and Click **Change connection type** and select **Modem IP**.
3. Type the modem IP address in the related field if needed
  - a. For Ethernet connection the default Modem IP is **192.168.0.1**
  - b. For USB connection, the default Modem IP is **192.168.111.1**
4. After the modem is detected, **click File > Configuration** and click on the **Firmware** tab
5. Click Browse and Select the upd (update) file you want to use, then click **Upgrade**
6. Wait for the firmware update to end and the modem to restart

### 2.2 Advanced Update

*\*When upgrading from 3.9.1 on the Wi-Fi units you must use the Advanced Update procedure for the initial update from 3.9.1.*

Download the Advanced Update Package from the [Sixnet](#) website and follow the instructions in the "Advanced Firmware Update & Recovery Guide" (BT-4000/BT-5000) or "Advanced Firmware Update Procedure" (BT-6000 and BT-5000v2).

<sup>1</sup> In this case, an advanced upgrade is necessary to gain IPsec support. IPsec functionality is optional, so if IPsec support is not required, a basic upgrade can be performed instead, assuming that the minimum release is met as per the "Advanced update required" column.



# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3 Release Notes

#### 3.1 Version 3.9.3 – Release Notes – June 14, 2013

The 3.9.3 release is intended for MobilityPro™ Gateway (BT-5630v2 and BT-5830v2) wireless modems

##### Dependencies

IndustrialPro™ and MobilityPro™ Gateway BT-5x30v2 Series		
	Current Version	Minimum Version
Kernel	2.6.27 #1	2.6.27 #1
Boot Loader	2009.01-btw02	2009.01-btw02
File System	3.0.0	3.0.0

##### Important Notes

- BT-5x30v2 modems require kernel 2.6.27 #1 or later and U-Boot 2009.01-btw02 or later.
- When upgrading from 3.9.1 on Wi-Fi units (BT-5630v2 / BT-5830v2) you **MUST USE** the Advanced Update procedure for the initial update from 3.9.1.

##### New Features & Improvements

ID	Category	Description
10853	Firmware	MC8705 Support on 3.9.3
10931	Firmware	GPS Engine monitoring offers better GPS response
11145	Firmware	+BWIFIMD return codes improved
11146	Firmware	Wi-Fi Password handling improved for +BWIFIAPM
11163	Firmware	Stability upgrades on Wi-Fi AP Performance
11379	Firmware	+BWANDT race condition fixed against +BMTIME=Cell
11596	Firmware	Firewall rules refined
11671	Firmware	RF Module information missing from some BEP Payloads



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## BT Series Firmware Release Notes

### 3.2 Version 3.8.16 – Release Notes – June 14, 2012

The 3.8.16 release is intended for Industrial Pro™ Gateway (BT-6XXX) and MobilityPro™ Gateway (BT-5XXXv2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw08	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- BT-5x30v2 modems require kernel 2.6.27 #1 or later and U-Boot 2009.01-btw02 or later.
- BT-6400 series modems require kernel 2.6.21 #btw03 or later.
- IPSEC support is provided on BT-5000v2 and BT-6000 series with kernel 2.6.21 #btw04.
- BT-5600v2 and BT-5800 require U-Boot 1.2.0-btw03 (fix LED inversion during reset) or 1.2.0-btw04 (CPU boards with Atmel rev. B chip).
- BT-6000 and BT-5000v2 series needs kernel 2.6.21 #btw06 to support multicast forwarding on GRE tunnels.
- USB Host on BT-5000v2 requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
9849	Firmware	AT+BINITs allows multiple module AT commands in a single command.
10044	Firmware	Sierra MC8705 Support
10086	Firmware	Fixed - BCMODE=0 getting stuck while disabling PPP on IGN down
10413	Firmware	New AT command AT+BIGNEN to enable/disable the ignition feature
10799	Firmware	Partner App auto-recover race condition - Improved backup manifest handling.
10926	Firmware	DHCP Server watcher added for compatibility with Embedded WinXP
10931	Firmware	GPS Engine restart if unresponsive
11058	Firmware	Revert to NMEA on unknown format with +BGPSPR=0,1,1
11143	Firmware	Log partition added, restart procedure unified
11150	Firmware	Additional file synchronization after writes reviewed
11150	Firmware	Kernel vm.dirty parameters reduced to prevent long write caching
11186	Firmware	Default config file backups were missing CRC after AT&F, causing extra NAND writes
11201	Firmware	NAND corruption prevention options
11201	Firmware	+GPSFIL SOG LOG behavior and odometer saving updated



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ID	Subject	Description
11233	Firmware	Disabled Stored System Time option from AT+BMTIME
11242	Firmware	AT+BDOSET. New optional parameter allows setting Digital Out without saving state
11244	Firmware	AT+BIGNNET added to control PPP disconnect after IGN shutdown. BCMODE=0 prevented
11264	Firmware	Fixed issue where Bluex fails to start multiple partner applications
11309	Firmware	High CPU utilization fixed while FTP server is enabled
11310	Firmware	Unfunctional downgrade prevented for units with MC8705
11346	Firmware	DCTM Optimization for loss of signal events
11354	Firmware	Enhanced ping pattern for PNGKA to optimize RF de-idling on 2G
11362	Firmware	Fixed - IPREG can report wrong IP after race condition reconnect
11379	Firmware	Fixed - BWANDT can disconnect when BMTIME updates from cellular late
11380	Firmware	Improved I/O Event (DI/DO) handling
11397	Firmware	Protection of BGETLG to prevent excessively large log captures
11431	Firmware	High CPU Utilization resolved under loss of signal
11472	Firmware	FTDI device 6011 added for USB Serial
11480	Firmware	+BSECUR=x at off-line/on-line mode
11529	Firmware	RFPWRON improved across old and new firmwares of MC8790
11535	Firmware	Excessive Speeding with no GPS signal resolved with additional valid NMEA checks
11640	Firmware	+BMTIME Offset fixed for GPS Mode, and reverts to archaic time when cell unavailable
BLUEX-7	Firmware	GPS Drift compensation in odometer
9621	SFM / BEP	Detect and prevent unconfigured events - Event 42/86 issue
11054	SFM / BEP	BEP messages with RSSI of 0 altered to 125
11057	SFM / BEP	Oversize SFM file prevented
11292	SFM / BEP	Stuck SFM Queue prevented with Bad Header detection and removal
11235	SFM / BEP	Invalid response of +BSFMST fixed
11238	SFM / BEP	Improved AT+BSFMRM=1 to erase SFM queue
11245	SFM / BEP	Wrong BEP packet sequence number - Fixed Bad Index message
11293	SFM / BEP	BEP UDP packet fails due to network unreachable. Invalid Destination should not block Queue
11644	SFM / BEP	BEP message with zero length GP1 payload prevented
11402	SFM / BEP	+BEVCMMD supports new AT+BDOSET save option



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## BT Series Firmware Release Notes

### 3.3 Version 3.9.2 – Release Notes – October 17, 2012

The 3.9.2 release is intended for MobilityPro™ Gateway (BT-5630v2 and BT-5830v2) wireless modems

#### Dependencies

IndustrialPro™ and MobilityPro™ Gateway BT-5x30v2 Series		
	Current Version	Minimum Version
Kernel	2.6.27 #1	2.6.27 #1
Boot Loader	2009.01-btw02	2009.01-btw02
File System	3.0.0	3.0.0

#### Important Notes

- BT-5x30v2 modems require kernel 2.6.27 #1 or later and U-Boot 2009.01-btw02 or later.
- When upgrading from 3.9.1 on Wi-Fi units (BT-5630v2 / BT-5830v2) you must use the Advanced Update procedure for the initial update from 3.9.1.

#### New Features & Improvements

10228	Wi-Fi	AT+BIFCON supports Wi-Fi interfaces
10213	Wi-Fi	Supports BlueTree SDK and 3 <sup>rd</sup> party applications



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## BT Series Firmware Release Notes

### 3.4 Version 3.8.15 – Release Notes – October 10, 2012

The 3.8.15 release is intended for Industrial Pro™ Gateway (BT-6XXX) and MobilityPro™ Gateway (BT-5XXXv2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw08	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- BT-5x30v2 modems require kernel 2.6.27 #1 or later and U-Boot 2009.01-btw02 or later.
- BT-6400 series modems require kernel 2.6.21 #btw03 or later.
- IPSEC support is provided on BT-5000v2 and BT-6000 series with kernel 2.6.21 #btw04.
- BT-5600v2 and BT-5800 require U-Boot 1.2.0-btw03 (fix LED inversion during reset) or 1.2.0-btw04 (CPU boards with Atmel rev. B chip).
- BT-6000 and BT-5000v2 series needs kernel 2.6.21 #btw06 to support multicast forwarding on GRE tunnels.
- USB Host on BT-5000v2 requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
10423	GPS	Improved GPS odometer accuracy
	Firmware	Update to read HEX ESN from MC5728V Sprint
10447	Firmware	RF Logs exclude GPS logs in /nvlog/gps
10447	Firmware	Limit for on-board GPS logs based on total disk usage
10088	Firmware	+BDOSET: Do not persist option implemented with downward compatibility



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## BT Series Firmware Release Notes

### 3.5 Version 3.8.14 – Release Notes – August 24, 2012

The 3.8.14 release is intended for MobilityPro™ Gateway (BT-5600v2 and BT-5800v2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw07	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- BT-5x30v2 modems require kernel 2.6.27 #1 or later and U-Boot 2009.01-btw02 or later.
- BT-6400 series modems require kernel 2.6.21 #btw03 or later.
- IPSEC support is provided on BT-5000v2 and BT-6000 series with kernel 2.6.21 #btw04.
- BT-5600v2 and BT-5800 require U-Boot 1.2.0-btw03 (fix LED inversion during reset) or 1.2.0-btw04 (CPU boards with Atmel rev. B chip).
- BT-6000 and BT-5000v2 series needs kernel 2.6.21 #btw06 to support multicast forwarding on GRE tunnels.
- USB Host on BT-5000v2 requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
N/A	GPS	Kalman 1D filter implemented and is enabled by default.
10134	GPS	Device logging instantiated with AT+BGPSFIL=4/6 now includes compression archiving and more descriptive file names
10015	GPS	RMC Status "F" points are now considered valid and BEP-reportable.
10015	GPS	SOG is modified in the raw NMEA message for BEP-facing logs. CRC is updated.
10015	GPS	SOG is updated using 1 or 2 decimals of precision to match what the chip reports.
10015	GPS	Fixed precision issue of Copernicus I vs. II NMEA truncation
10134	Firmware	Fixed ability to retrieve large device logs
9841	Firmware	Fixed ability to delete GPS SOG logs (AT+BGPSFIL=0)
9788	Firmware	Lost Partner Application fixed with manifest backup method
9817	Firmware	RF Powerdown state saved prior to shutdown
10086	Firmware	Improved cellular deregistration of connection upon IGN drop on BT5K



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## BT Series Firmware Release Notes

### 3.6 Version 3.8.13 – Release Notes – June 29, 2012

The 3.8.13 release is intended for MobilityPro™ Gateway (BT-5600v2 and BT-5800v2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw07	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- BT-5x30v2 modems require kernel 2.6.27 #1 or later and U-Boot 2009.01-btw02 or later.
- BT-6400 series modems require kernel 2.6.21 #btw03 or later.
- IPSEC support is provided on BT-5000v2 and BT-6000 series with kernel 2.6.21 #btw04.
- BT-5600v2 and BT-5800 require U-Boot 1.2.0-btw03 (fix LED inversion during reset) or 1.2.0-btw04 (CPU boards with Atmel rev. B chip).
- BT-6000 and BT-5000v2 series needs kernel 2.6.21 #btw06 to support multicast forwarding on GRE tunnels.
- USB Host on BT-5000v2 requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
9771	Firmware	Fixed 3.8.12 downgrading issue
9843	GPS	Added new AT+BGPSKAL command for Kalman filter (GPS)
9841	GPS	Added AT+BGPSFIL and new GPS filter
9822	Kernel	Turn on overcommit of system memory in Linux kernel
9787	Kernel	SIP: scrolling issue in Cisco router console
9748	Logging	Updated Sog.log messages Refs



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### 3.7 Version 3.8.12 – Release Notes – April 04, 2012

The 3.8.12 release is intended for MobilityPro™ Gateway (BT-5600v2 and BT-5800v2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw07	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.
- USB Host support (MobilityPro™ Gateway only) requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
1256	Network	Implemented TCP poll for Rastrac
1255	RF	HSPA RF hangs in IP Pass-thru mode at Telus lab tests
1252	Serial IP	AT&C3 -- DCD signal is decided by SIP TCP connection status
1251	BEP	BEP events not sent while the server is available
1250	BEP	ignition status is falsely reported on IO1 payload
1249	BEP	+BEVENT? not working in BEP MOM
1248	AT	Missing line feed character via serial port
1243	Events	Local Event Going to Wrong Destination
8558	Factory Tests	Expand the length for AT+BFACTINF command
1241	Fire Wall	IP source violation in IP pass-through mode
1223	RF	AT+BMDIAG to show override SPN name instead of network name



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### 3.8 Version 3.9.1 – Release Notes – February 9, 2012

The 3.9.1 release is intended for MobilityPro™ Gateway (BT-5630v2 and BT-5830v2) wireless modems.

#### Dependencies

IndustrialPro™ and MobilityPro™ Gateway BT-5x30v2 Series		
	Current Version	Minimum Version
Kernel	2.6.27 #1	2.6.27 #1
Boot Loader	2009.01-btw02	2009.01-btw02
File System	3.0.0	3.0.0

#### Important Notes

- BT-5x30v2 modems require kernel 2.6.27 #1 or later and U-Boot 2009.01-btw02 or later.
- When upgrading from 3.9.1 on Wi-Fi units (BT-5630v2 / BT-5830v2) you must use the Advanced Update procedure for the initial update from 3.9.1.

#### New Features & Improvements

1173	Wi-Fi	Update linux kernel to 2.6.27
1177	Wi-Fi	Add Wi-Fi control to bthw
1187	Wi-Fi	Add support for BT-5630v2 and BT-5830v2
1192	Wi-Fi	Add support for the BT-Wi-FiCARD-A
1193	Wi-Fi	AT+BWI-FIMD Control Wi-Fi Mode
1196	Wi-Fi	GPS serial port not configured
1198	Wi-Fi	su (root) login
1204	Wi-Fi	iptables warnings
1205	Wi-Fi	Configure AP mode
1206	Wi-Fi	Configure AP mode specific parameters



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.9 Version 3.8.11 – Release Notes – July 07, 2011

The 3.8.11 release is intended for MobilityPro™ Gateway (BT-5600v2 and BT-5800v2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw07	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.
- USB Host support (MobilityPro™ Gateway only) requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
1240	BEP	Wrong RSSI value reported in BEP events



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.10 Version 3.8.10 – Release Notes – June 20, 2011

The 3.8.10 release is intended for MobilityPro™ Gateway (BT-5600v2 and BT-5800v2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw06	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.
- USB Host support (MobilityPro™ Gateway only) requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
1212	Serial IP	Mobile Originated SIP :Add a modem ID(ESN/IMEI) as a header for each outgoing UDP packets
1223	RF	AT+BMDIAG and AT+BNSTAT to show override SPN name instead of network name for HSPA
1219	DNS	Added framework for DNS resolving, implemented for AT+BGPSDS, AT+BRPRDS, AT+BSIPDS, and AT+BIPREG
1233	Embedded APP	DNS support for embedded applications
1225	GPS	Add a new AT command for GPS elevation angle mask
1235	IO	Add a new AT command to adjust IO sampling interval
1215	RF	BT6400 Ping-keep-alive reset may keep the modem offline Add RF module reset as part of soft reset process
1213	RF	AT+BRFPON=0 takes too long to complete for CDMA during data session
1218	GPS	No GPS fix after intensive Ignition resets Added GPS module reset process in modem warm-reset process
1224	GPS	Losing GPS UDP report to local destination at ignition start-up
1222	RF	HSPA and CDMA RF power mode switched on/off multiple times causing modem reset
1228	RF	Turning off HSPA modem RF power causing long delay on RF event reporting
1231	Serial IP	Configuring the Serial IP on poll and push mode simultaneously may cause SIP to switch to command mode
1234	RF	WAN led remains on after Radio Power is turn off when using CDMA RF version MC5727 1.49
1236	BEP	BEP packets to local host stopped when RF is powered off



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.11 Version 3.8.9 – Release Notes – February 15, 2011

The 3.8.9 release is intended for MobilityPro™ Gateway (BT-5600v2 and BT-5800v2) wireless modems with or without the USB Host extension.

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw09	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw06	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.
- USB Host support (MobilityPro™ Gateway only) requires kernel 2.6.21 #btw09 and u-boot 1.2.0-btw06.

#### New Features & Improvements

ID	Subject	Description
1191	USB Host	Add USB Host to BT-5000v2 series. The feature requires the addition of a daughter card in the modem and of a USB Type A receptacle.
1203	USB Host	Add the AT+USBHOST=<mode> command to enable/disable and query the USB Host power
1210	USB Host	Add support for USB to Serial adapters. Include drivers for the two main devices: FTDI (ftdi_sio) and Prolific (pl2303)
1211	RF	Added workaround for Bell CDMA 01.67.01 call hangs on cold-start



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.12 Version 3.8.8 – Release Notes – December 14, 2010

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw08	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw05	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.

#### New Features & Improvements

ID	Subject	Description
<b>646</b>	<b>IP routing</b>	Double the number of IP forwarding ports to 40 ports (AT+BIPFWD)
<b>1071 1178</b>	<b>Serial IP</b>	Add the AT+BSIPMO (Serial IP Mobile Originated settings) command to allow setting up a timer used for keeping the Serial IP connection alive. The timer is used for TCP Keep-Alive timer setting or for periodically sending an empty UDP packet to keep firewalls open. When configured with a non-null timer value the modem is not waiting for data to be present on the serial port to establish a connection.
<b>1185</b>	<b>BEP</b>	Add network information to RF2 payload for GSM modems The BEP RF2 Carrier information now contains the GSM operator name (see AT+BMDIAG?) for GSM modems (GPRS/EDGE/HSPA). For CDMA modems, the field contains the programmed carrier name.
<b>1189</b>	<b>IP Forwarding</b>	Add the AT+BIPFWDI=<index>,<interface> command to set/query the interface of the incoming IP packets to forward. With this command, the modem can now perform IP forwarding on packets arriving on the Ethernet(1), USB(2) or WAN(3 - default) interface.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### Fixed Issues

ID	Subject	Description
1179	LAN	DNS settings are now updated into the DHCP configuration even when it changes during a connection. DHCP lease time shall be configured for the DHCP client to get the updated DNS settings.
1182	RF	The RF power off state (available via AT+BRFPON=0 on BT-4600A/BT-5600A, BT-6000 series, and BT-5000v2 series) is now persistent after a reboot (broken in 3.8.5).
1184	BEP	The MI3 payload was missing RF and GPS information when associated with the IGN ON trigger.
1190	RF	RF Tx power can now be disabled via AT+BRFPON=0 on BT-6600 series and BT-5600v2 without triggering a modem reset.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.13 Version 3.8.7 – Release Notes – September 28, 2010

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw07	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw04	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.

#### Fixed Issues

ID	Subject	Description
<b>1180</b>	<b>WAN</b>	EvDO Rel. 0: Cannot connect in Always-on The RF Power status test intended for EvDO A modems was preventing BT-4600 and BT-5600 modems to connect when in Always-on mode.
<b>1181</b>	<b>Events</b>	Modem fails to send raw NMEA GPS using AT+BEVRPR.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.14 Version 3.8.6 – Release Notes – September 17, 2010

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw07	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw04	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.

#### Fixed Issues

ID	Subject	Description
1176	AT	In on-demand mode, requesting a manual disconnection while the modem is being disconnected due to RF conditions may cause a modem restart.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.15 Version 3.8.5 – Release Notes – September 9, 2010

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw07	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw04	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.

#### New Features & Improvements

ID	Subject	Description
956	Events	Increase the number of configurable events (AT+BEVENT) to 63.
1157	GPS	Add the capability to log received GPS fixes (AT+BGPSLOG). When enabled, the GPS logs are part of the modem log files.
1161	GPS	Periodically save GPS odometer value in non-volatile memory independently of IGN state.
1158	RF	Report the RF module type in AT11. Report PRI (CDMA EvDO.A and HSPA) and PRL Region (HSPA) in AT11.
1150	RF (EVDO.A)	Add support for MC5728V RF module
1160 1169	RF (HSPA)	Add Sasktel and MTS to automatic HSPA configuration. Automatic GSM/EDGE/HSPA configuration occurs when the modem is reset to its factory configuration (AT&F) according to the installed SIM card. This feature may be restricted on some modems.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### Fixed Issues

ID	Subject	Description
1155	AT	An incorrect IP settings in AT+BIPREG was crashing the modem
1156	AT	Modem failed to properly close the telnet to ports 5070/6070 when the peer terminates the connection.
1159	AT	AT+COPN? was returning ERROR since the response is too long to fit in the AT command response buffer. The results may now be obtained by issuing successive AT+COPN commands.
1162	AT	Modem may restart randomly when AT+BMDIAG? is automatically issued at very high frequency.
1151	Events	Legacy modems (BT-4000/BT-5000) had an invalid device ID in BEP messages.
1153	Events	AT command response was restricted to short strings.
1165	Events	Reduce latency to send first BEP message
1167	Events	IMOM (Initial Mobile Originated Management) Server errors are logged too frequently. IMOM connection to a remote server is now only attempted every 30 minutes.
1154	IP Registration	The IP registration message sent by GSM modems had an extra white space.
1166	IP Routing	Incorrect LAN routing when in On-Demand mode and not connected to WAN.
1152	Partner Apps	The application was occasionally failing to start.
1164	RF	Add WD to recover from a failure to connect in on-demand mode.
1048	RF (HSPA)	Show the HSPA packet session status in the RF state of AT+BMDIAG? and AT+BNSTAT? of HSPA modems.
1103	RF (HSPA)	Re-enabling the HSPA RF module transmit (AT+BRFPON=1) is no longer triggering a modem reset.
1163	RF (HSPA)	Modem to report only the RSSI of the active cell (HSPA).



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.16 Version 3.8.4 – Release Notes – June 7, 2010

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw07	2.6.21 #btw03
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw04	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- IPsec support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw04 or above.
- GRE tunnel support (IndustrialPro™ and MobilityPro™ Gateway only) requires kernel 2.6.21 #btw06 or above.

#### New Features & Improvements

ID	Subject	Description
1023	Modem Time	<b>Synchronize modem time on NTP, GPS or CELL</b> Add the AT+BMTIME command to select the time source, the AT+BNTPT to select NTP servers and the AT+BNTPTST command to monitor the NTP client.
1042	GRE Tunnels	<b>GRE Tunnel support</b> Add the AT+BGRETUN, AT+BGREOPT, AT+BGREKEY, AT+BGREMR, AT+BGREDI, AT+BMCASTR, AT+BSROUTE AT commands to support GRE tunneling. This feature is available on BT-6000 and BT-5600v2/BT-5800v2 only with kernel 2.6.21 btw#06 or above.
1043	GPS	<b>Specific NMEA sentence mask per destination</b> The AT+BGPSRP allows to set a specific NMEA message mask per GPS destination (IP1, IP2 and Serial).
1044	GPS	<b>Specific reporting timer per destination</b> The AT+BGPSRP allows to set a specific reporting timer per GPS destination (IP1, IP2 and Serial).
1116	Events	<b>Add capability to log BEP events (AT+BEVLOG).</b>
1117	Events	<b>Add capability to purge stored BEP events (AT+BSFMRM=1)</b> Note: The modem needs to be reset once the command is issued.
1118	Events	<b>Report Store and Forward memory status (AT+BSFMST?)</b> The AT+BSFMST? command reports the number of used and free memory blocks as well as the number of stored events per BEP destination.
1142	Security	<b>Serial port AT command protection</b> Access to AT command can now be password protected the same way as access from LAN and/or WAN with the AT+BRPSWD command.



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## BT Series Firmware Release Notes

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### 3.17 Version 3.8.3 – Release Notes – February 18, 2010

#### *Dependencies*

Unchanged from 3.8.0, see below.

#### *Fixed Issues*

ID	Subject	Description
1113	IP pass-through	Occasionally, when first acquiring the WAN IP address or when the WAN IP address gets re-negotiated, the modem may fail to configure the interface assigned to IP pass-through with the WAN IP until the modem resets.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.18 Version 3.8.2 – Release Notes – February 12, 2010

#### Dependencies

Unchanged from 3.8.0, see below.

#### New Features & Improvements

ID	Subject	Description
1053	HSPA	<b>HSPA automatic configuration</b> When the modem is reset to factory configuration (AT&F or Action > Reset Modem in BVDM), the connection dial string, username, password and APN are automatically set according to the SIM card settings.

#### Fixed Issues

ID	Subject	Description
1032	Serial port	Serial port not reset to configuration settings after BVDM disconnects.
1037	Events	AT+BEVGSS syntax should be verified
1039	Serial IP	IP->Serial and Serial->IP values inverted in SIP diag
1092	RF	EVDO A modems may fail to connect (Verizon and Sprint only).
1097	RF	WAN LED does not blink to indicate WAN activity
1098	RF	Modem failed to log RF Diagnostic information (DM) in QxDM
1099	Configuration	Modem loses its password after upgrade
1102	RF	HSPA: Manual network selection (+COPS) is missing parameter
1107	AT	Frequent +BMDIAG/+BNSTAT resets modem
1108	Configuration	Firmware upgrade sets MTU to zero

#### Known issues

Unchanged from 3.8.0, see below.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

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### 3.19 Version 3.8.1 – Release Notes – January 11, 2010

#### *Dependencies*

Unchanged from 3.8.0, see below.

#### *Fixed Issues*

ID	Subject	Description
1082	AT	Frequent connections/disconnections from telnet AT commands reset modem.
1087	Events	MI2 and MI3 PRL and GPS version fields are missing for some modem models.
1089	Events	Information is missing in initial ignition ON BEP message.
1088	RF	BT-6400 series modems fail to report EDGE service when available.
1092	RF	EVDO A modems may fail to connect (Verizon and Sprint only).
1090	Startup	Improve hardware verification (Ethernet and USB) at modem startup.
1100	Startup	Improve cold weather modem startup.

#### *Known issues*

Unchanged from 3.8.0, see below.



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# IndustrialPro™ and MobilityPro™ Gateway Wireless Modems

## BT Series Firmware Release Notes

### 3.20 Version 3.8.0 – Release Notes – December 18, 2009

#### Dependencies

	Legacy modems BT-4000 / BT-5000 Series		IndustrialPro™ and MobilityPro™ Gateway BT-5000v2 / BT-6000 Series	
	Current Version	Minimum Version	Current Version	Minimum Version
<b>Kernel</b>	2.6.15.1bt5	2.6.15.1bt5	2.6.21 #btw06	2.6.21 #btw02 <sup>2</sup>
<b>Boot Loader</b>	1.1.3bt10	1.1.3bt8	1.2.0-btw04	1.2.0-btw02
<b>File System</b>	3.0.0	2.0.0	3.0.0	3.0.0

#### Important Notes

- Release 3.6.2 added IPsec functionality to the BT-5000v2 and BT-6000 series modems. If upgrading from a version prior to 3.6.2, an advanced upgrade is necessary to enable IPsec support.

#### New Features & Improvements

ID	Subject	Description
674	Firmware upgrade	<b>Modem initiated upgrade package download</b> The AT+BWGET can be used to download an upgrade package from an FTP or HTTP site.
1014	Events	<b>WAN event added to BEP</b> The WAN event (see AT+BEVENT) can be used to signal when the modem has a WAN IP address and when it changes.
1015	Events	<b>Modem Originated Management</b> Destination type 3 (MOM) can now be used to initiate management action from the modem. See AT+BRPRDS/AT+BEVRPR/AT+BEVENT. This feature is meant to operate with BlueVue Group (release 2.1.80)
1017	Events	<b>Add new BEP payloads: MI2, MI3, RF2, IP1</b> Those new message payloads can be used to report status information to a management server.
1018	Events	<b>Add new BEP payload: AU1</b> This new BEP payload can be used authenticate BEP messages.
1019	Events	<b>Add new BEP payload: AC1</b> This new BEP payload can be used to exchange AT commands and responses between a management server (BVG) and the modem.
1027	GPS	<b>Synchronize modem time on GPS: AT+BGPSDT</b>

<sup>2</sup> The “minimum” kernel version of 2.6.21 #btw02 does not support IPsec. If IPsec is required, an advanced upgrade should be performed to upgrade the kernel to 2.6.21 #btw04 or above.



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## BT Series Firmware Release Notes

### Fixed Issues

ID	Subject	Description
1028	Serial IP	Modem fails to transfer files via Serial IP
1035	IPSEC	AT+BIPSSN? does not display the remote subnet configuration
1040	RF	RF diagnostic pass-through via serial fails
1054	FTP	The FTP server was failing when enabled multiple times.
1055	DHCP	In IP pass-through, the DHCP lease time is reduced to 30 seconds until the WAN IP is available and assigned to the local interface. The configured DHCP lease time is then used.
1056	GPS/Events	GPS/BEP UDP destinations connects/disconnects every 30 seconds This occurred when +BSYNC was used and no ACK messages were received.
1057	RF	HSPA: Intermittent high latency and ping packet loss
1073	AT	AT+BIPINF returns ERROR
1077	GPS	GPS fix not reported
1079	UDP	Intermittent high latency and loss of UDP packets
1080	RF	HSPA: MCC reported instead of MNC

### Known Issues

ID	Subject	Description
917	Activation	New modems on Sprint now utilize OMA-DM instead of IOTA for provisioning, resulting in an error when the AT!IOTASTART command is issued. OMA-DM can be started with AT!dmdc=2 instead. This change requires BlueVue Device Manager 1.7.9 for automatic activation.
880	Activation	A bug in the Sierra Wireless MC5727 module returns ERROR during activation when in fact the activation may have been successful. A workaround is available in BlueVue Device Manager 1.7.9.
966	WAN LED	The WAN LED on BT-5800v2 and BT-6800 series may not indicate the connection status when the RF Transmit has been disabled and then re-enabled using AT+BRFPON. This issue only exists with RF module firmware: K1_0_2_8AP.



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## BT Series Firmware Release Notes

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### 4 Support Information

Visit the Industrial Wireless Product Support section of Sixnet website to download product manuals, software updates and modem firmware updates.

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