PH8

Five-Band 3G		Quad-Band 2G	
HSPA+		GPS	
GPRS / EDGE Class 12		Extended Temperature Range	
Full Voice Support		USB 2.0	
TCP / IP		RIL Driver	

Cinterion PH8
True Global Coverage with 3G

The new Cinterion PH8 HSPA+ cellular machine-to-machine (M2M) module offers a smart solution for wireless connectivity today and in the future. With the latest HSPA+ technology, PH8 is optimized for high bandwidth and allows for speeds up to 14.4 Mbps for downlink and 5.7 Mbps for uplink. PH8 is available in two versions, the PH8 and PH8-P. Operating on quad-band GSM/GPRS, EDGE and five-band UMTS/HSPA+ (PH8: 800/850, AWS, 1900, 2100 MHz and PH8-P: 800/850, 900, 1900, 2100 MHz), PH8 provides true worldwide coverage and reliability even while roaming across different wireless network techno-logies. By enabling a full range of M2M functions and features, PH8 protects your technology investment by ensuring reliable communications today while

allowing room for growth to 3.5G cellular technology on evolving GSM networks for many years to come. PH8 offers an ideal communication solution for the challenging requirements of a variety of M2M applications such as ruggedized mobile computing, security solutions, medical equipment, payment systems and gateway routers.

Cinterion's PH8 offers GPS capabilities with three antennas for HSPA diversity and concurrent GPS tracking. An intelligent single-sided design provides superior heat dissipation characteristics. With an 80-pin B2B connector, PH8 easily supports migration from 2G to 3G and is based on a state-of-the-art chipset for an extended product life cycle.

CINTERION
a Gemalto company

PH8

General Features

- Five Band UMTS (WCDMA/FDD):
  PH8: 800/850, AWS1700, 1900, 2100 MHz
  PH8-P: 800/850, 900, 1900, 2100 MHz
- Quad-Band GSM: 850, 900, 1800, 1900 MHz
- UMTS / HSPA+, 3GPP release 6 / 7
- GSM / GPRS / EDGE, 3GPP release 99 / 4
- SIM Application Toolkit, release 99
- SAIC / RX Diversity Type 3i
- Control via AT commands
  (Hayes, 3GPP TS 27.007 and 27.005)
- Supply voltage range 3.3 - 4.2 V
- Dimension: 50 x 33.9 x 3.1 mm, single sided
- Operational Temperature range:
  -40°C to +85°C

GPS Features

- Standalone GPS
- GPS dedicated AT commands
- A/GPS support: standalone, XTRA®, CP E911
- Protocol: NMEA-0183 V2.3
- Option for temporary NMEA stream buffering
- GPS active antenna supply: 3V
- Tracking Sensitivity: better than -158 dBm
- Prepared for GLONASS

Specifications

- HSDPA/HSUPA data rates:
  DL: 7.2 / 14.4 Mbps, UL: 2.0 / 5.76 Mbps
  Concurrent data rate:
  DL: 7.2 Mbps, UL: 5.76 Mbps
- UMTS data rates:
  DL: max. 384 kbps, UL: max. 384 kbps
- EDGE class 12:
  DL: max. 237 kbps, UL: max. 237 kbps
- GPRS class 12:
  DL: max. 85.6 kbps, UL: max. 85.6 kbps
- CSD data transmission 14.4 kbps, V.110
- SMS text and PDU mode
- Voice specification:
  HR, FR, EFR and AMR supported handset,
- headset and hands-free telephony.
  Dual microphone support for suppression
  of non-stationary background noise.
- TTY supported

Approvals

- R&TTE, FCC, GCF, PTCRB, UL, IC, CE
- AT&T, Telstra and other local approvals
 and provider certifications

Interfaces

- 80-pin board-to-board connector
- 2 x antenna connectors for GSM/UMTS
- 1 x antenna connector for GPS
- Power supply
- Audio: 1 x analog, 1 x digital (PCM or I2S)
- USB 2.0 high speed
- UICC and U/SIM card interface 3V, 1.8 V
- Emergency-off
- Network status
- Serial interfaces up to 920 kbps

Special Features

- NDIS/USB/MUX driver for Microsoft®
  Windows XP™, Windows Vista™ and Windows 7™
- RIL/NDIS/USB/MUX driver for devices based on
  Microsoft® Windows Embedded Handheld™
- USB/MUX driver for Microsoft® Windows Embedded Compact™
- RIL driver for devices based on Android OS™
- Internet Services via TCP/IP Stack
- Customer IMEI/Netlock as variant
- Firmware update via USB and serial Interface
- USB supports multiple composite modes and a
  CDC-ACM compliant mode for Linux

For detailed specification please see hardware interface description.

True Global Coverage with 3G

50 mm

33,9 mm
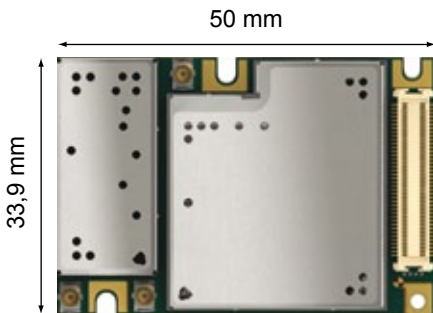
Full Voice Support

PH8 includes best-in-class analog audio processing which allows quick & easy audio implementation.

Improved Power Management

Improved power management features in the PH8 module preserve battery power necessary for remote M2M devices, resulting in reduced heat dissipation. Combined with its single-sided design for superior heat dissipation PH8 is the first choice for temperature critical M2M applications.

Three Antenna Connectors

Two antenna connectors enable diversity support, so PH8 provides improved data speed even under fluctuating 3G network conditions. The GPS antenna path is optimized for elimination of blanking on GPS for a consistent performance.

Cinterion Global Support

Local engineers, a competent helpdesk, a dedicated team of R&D specialists and an advanced development center are the hallmarks of our leading support offer.

The Cinterion support includes:

- Personal design-in consulting for hardware and software
- Extensive RF test capabilities
- GCF/PTCRB conform pretests to validate approval readiness
- Guidelines for local approvals and acceptances
- Regular training workshops

Further information about our products and services is also accessible via www.cinterion.com