security to be free

AHS3

	HSPA+ / UMTS		RLS Monitoring
	Triple-Band 3G		GPS / A-GPS, GLONASS
	eCall Compliant		Extended Temperature Management
	Antenna Diagnostics		USB 2.0
	Digital & Analog Audio Support		RIL Driver

HSPA+

Cinterion® AHS3 Wireless Module
Automotive 3G SMT with Migration Path to LTE

Cinterion® AHS3 Wireless Module
Automotive 3G SMT with Migration Path to LTE

The new Cinterion AHS3 flagship HSPA+ module for automotive applications is optimized for high quality audio support and high bandwidth connectivity allowing speeds up to 14.4 Mbps for downlink and 5.7 Mbps for uplink. The solderable platform offers true global 3G coverage in two cost-optimized variants for improved Total Cost of Ownership: AHS3-US and AHS3-W.

AHS3 is engineered to meet the highest level of compliance with automotive specifications and provides an unparalleled level of quality and performance, even under the harshest operating conditions.

The unique Cinterion Land Grid Array (LGA) technology enables optimized heat dissipation that prevents warping. It gives our automotive customers the freedom to select the most beneficial soldering paste for each individual application. Based on Qualcomm's latest chipset, the module's extreme ruggedness and ultra compact LGA footprint guarantee long product availability and a reliable migration path to Long Term Evolution (LTE), critical as 4G technology becomes imperative to support future data-intensive services in automotive entertainment systems.

Equipped with high performance GPS/GLONASS, the AHS3 platform is already prepared to meet the comprehensive requirements of the European eCall and ERA-GLONASS initiatives. It also features in-band modem functionality, voice prompts, high quality audio according to VDA 2a, jamming detection, antenna diagnosis as well as TCP/IP services.

The AHS3 is an ideal enabler for current and future high performance automotive and ITS applications including: toll collect, onboard vehicle telematics and fleet management, in-car entertainment systems as well as automatic emergency calling, breakdown support or roadside assistance.

Automotive 3G SMT with Migration Path to LTE

33 mm   2.4 mm

29 mm

Future Proof Design
At just 2.4 mm in height, AHS3 is ideal for integration in the slimmest and most size constraint automotive solutions. Extreme ruggedness and the latest long-life chipset ensure long product availability to meet automotive market requirements. With the future proven LGA footprint today's automotive application are already prepared for forthcoming LTE standard enjoying a confirmed migration path.

Improved Power Management
AHS3 improved power management features preserve the battery power necessary for automotive systems and reduce heat generation. Combined with its intelligent design for superior heat dissipation, AHS3 is the first choice for temperature critical automotive applications.

Automotive Compliance
The AHS3 is compliant with multiple automotive manufacturing process standards according to TS16949 and quality processes including APQP, PPAP, PCN and 8D.

Gemalto M2M Support includes:
> Personal design-in consulting for hardware and software
> Extensive RF test capabilities
> GCF/PTCRB conform pretests to validate approval readiness
> Regular training workshops

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.

Cinterion® AHS3 Features

GENERAL FEATURES

> AHS3-W:
  Tri-Band UMTS (WCDMA/FDD): 800/850, 900 and 2100 MHz
  Quad-Band GSM: 850 / 900 / 1800 / 1900 MHz
> AHS3-US:
  Dual-Band UMTS (WCDMA/FDD): 850 and 1900 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 for all bands
> Control via AT commands
  (Hayes, 3GPP TS 27.007 and 27.005)
> Supply voltage range 3.3 V – 4.2 V
> Dimension: 33 x 29 x 2.4 mm
> Temperature range -40 °C to +85 °C
  (Protection switch-off)
> RoHS, EuP
> IMDS listed GADLS compliant

SPECIFICATIONS

> HSDPA/HSUPA data rates
  DL: max. 14.4 Mbps, UL: max. 5.7 Mbps
  Concurrent data rate: DL 7.2 Mbps/UL 5.7 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
  Full PBCCH support, EDA
> CSD data transmission 14.4 kbps, V.110
> SMS text and PDU mode

> Remote SIM access (SIM Access Profile)
> TCP/IP connectivity
> Voice specification: HR, FR, EFR and AMR
  supported Handset, Headset and Handsfree modes
> RLS Monitor (Jamming Detection)
> TTY supported
> eCall according to 3GPP Rel8, inband modem
  embedded
> ERA-GLONASS ready
> Voice prompts
> VDA hands-free category 2a

SPECIAL FEATURES

> Customer IMEI/Netlock as variant

> Firmware update via USB and serial Interface

GPS/GLONASS FEATURES

> E911 A-GPS functionality via Control Plane
> Fully integrated GPS/GLONASS solution
> GPS/GLONASS dedicated AT command
> Protocol: NMEA-0183

> GPS/GLONASS active antenna supply prepared
> Support of dead reckoning
> Tracking Sensitivity: better than -158 dBm
> Galileo support with external equipment

INTERFACES (SMT-LGA)

> 2 x antenna pads for GSM/UMTS
> 1 x antenna pads for GPS
> Audio: 1 x digital, 1 x analog
> USB 2.0 high speed
> UICC/SIM card interface 3 V, 1.8 V

> Serial interface with autobauding
> 10 x GPIO
> Antenna diagnostics for GSM/UMTS/GPS
  antennas supported
> I^2C bus

DRIVERS

> 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™

APPROVALS

> R&TTE, FCC, GCF, PTCRB, UL, IC, CE
> Automotive e-mark

> Local approvals and network operator certifications

For more information, please visit
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