

H24 HSPA Series

Delivering M2M Solutions in Zero Time, Zero Effort



- 5.76 Mbps HSUPA
- 7.2 Mbps HSDPA
- Tri Band UMTS/HSPA
- Quad Band GSM
- EDGE Class 12
- GPRS Class 12
- GPS
- Ext. RF
- Internal TCP/IP, UDP
- SSL - Secure Connection
- OverThe Air
- Ext. Temperature
- RoHS
- Fully Type Approved
- 24 Family Form Factor
- Embedded SIM

Welcome to the next generation.

It's time for M2M to enter the next level with the H24, a series of 3.5G wireless modules. The H24 features blazing fast HSUPA/HSDPA connectivity, taking advantage of global 3.5G deployment while still leveraging backwards compatibility with GSM/GPRS and EDGE networks.

Mobile broadband.

Realize the full potential of M2M with true broadband connectivity, especially where traditional infrastructure does not exist. The HSPA-powered H24 opens the door for new and innovative solutions in which bandwidth is no longer an obstacle.

A 3-Tiered solution.

The H24 series is offered in three tiers, providing you with the ideal feature set for your M2M needs.

The **H24^{basic}** offers a state of the art 3.5G solution, including a 5.76Mbps uplink data rate, FOTA, high-speed USB 2.0 and enhanced audio. Leverage the H24^{basic}'s rich set of features to empower your mobile office with phone, fax and wireless broadband internet. The H24^{basic} also includes built-in internet and security protocols, making it an efficient solution for both home and commercial security systems.

The **H24^{advanced}** shares all of the H24^{basic}'s features, and adds improved RF performance thanks to best-in-class receiver diversity. On-board GPS capabilities are also part of the H24^{advanced}, making it a powerful solution for any location-based application facing harsh network conditions.

The **H24^{premium}** brings even more value to the H24 Series with embedded SIM technology, enabling increased robustness and security to your solution.



Actual size

A World of connectivity possibilities.

The H24 HSPA Series is made up of 4 individual versions, offering various HSPA-band combinations for broadband connectivity wherever you need. All versions also support quad-band GSM/GPRS/EDGE.

The H24 Series includes:

- **H24 Single** 2100 MHz
- **H24 Global** 850/1900/2100 MHz
- **H24 NA** 850/1900/1700-2100(AWS) MHz
- **H24 Dual** 900/2100 MHz

Flexible integration.

The H24 is built with Motorola's time-tested "24" family form-factor, giving you flexibility with a single design solution for zero time, zero effort integration.

Dedicated to M2M.

Motorola's renowned commitment to quality and dedicated support continue to set the standard for M2M. Our products and manufacturing processes are held to the harshest industry standards, providing modules that are built to last. From design phase to accreditation, Motorola is here for you.

H24 Series Specifications

Product Features

Supported Bands

- UMTS/HSPA bands:
 - H24 Global 850/1900/2100 MHz
 - H24 Single 2100 MHz
 - H24 NA 850/1900/1700-2100(AWS) MHz
 - H24 Dual 900/2100 MHz
- Quad Band GSM 850/900/1800/1900 MHz
(Available in all 4 versions of the H24)

Data

- UMTS/HSDPA/HSUPA 3GPP release 6
- HSUPA 5.76Mbps
- HSDPA 7.2Mbps
- GSM 3GPP release 99
- EDGE (E-GPRS) multi-slot class 12
- GPRS multi-slot class 12

GPS

- Multimode GPS (Standalone and Assisted) 1575 MHz

Physical

- Size: 24.4 x 45.2 x 5.4 mm
(6.1mm stacking height)
- Mounting: two 2.4 mm holes
- Weight: <10 grams

Environmental

- Operating temperature: -30°C to +65°C
- Restricted Temperature: -30°C to +85°C
- Storage temperature: -40°C to +85°C

Firmware Upgrade

- Firmware upgrade Over-the-Air (FOTA)

Performance

Operating Voltage

- Voltage: 3.3V - 4.2V

Current Consumption

- <1.5mA @DRX9 (Sleep Mode)

TX Power

- UMTS/HSPA – Class 3 (0.25 Watt)
- GSM 850/900 MHz – Class 4 (2Watt)
- GSM 1800/1900 MHz – Class 1 (1Watt)
- EDGE 850/900 MHz – Class E2 (0.5Watt)
- EDGE 1800/1900 MHz – Class E2 (0.4Watt)

Interfaces

Connectors

- Single 70 pin board to board
- RF
 - Main antenna – MMCX / Pad
 - Diversity antenna – U.FL
 - GPS antenna – U.FL

Connectivity

- USB 2.0 high speed
- Multi channels over USB
- Fast UART: BR from 300 bps to 4 Mbps

Operating Systems Supported

- Windows® XP & Vista
- Linux

Data Features

- Embedded TCP/IP and UDP/IP
- SSL - Secure Connection

HSPA

- Max uplink 5.76Mbps
- Max downlink 7.2Mbps
- UE CAT [1-8], 11, 12 supported
- Compressed mode (3GPP TS25.212)

EDGE

- Multi-slot class 12
(4 Down; 4 Up; 5 Total)
- Coding Scheme MCS1-MCS9

GPRS

- Multi-slot class 12
(4 Down; 4 Up; 5 Total)
- Coding Scheme CS1-CS4

CSD

- UMTS Max BR 64 Kbps
- GSM Max BR 14.4 Kbps

SMS

- MO / MT Text and PDU modes
- Cell broadcast

FAX

- Group 3, Class 1

Voice Features

- Telephony
- Digital audio
- 2 Differential microphones
- 3 Speakers
- Vocoders EFR/HR/FR/AMR
- DTMF support
- TTY support
- Enhanced Audio**
 - Broad gain control
 - Filter Control
 - Echo cancellation
 - Noise suppression
 - Side tone

Character Set

- IRA
- GSM
- UCS2

Control / Status Indications

- 8 GPIO's
- UMTS/GSM Network coverage
- Wake up in/out
- Temperature sensor
- Voltage sensor
- Dedicated coin cell pin

AT Command Set

- Motorola proprietary AT commands
- GSM 07.05
- GSM 07.07

Accessories

- Firmware data loader over serial connection
- Data logger
- Developer Kit

Regulatory and Approvals

- FCC, IC
- PTCRB
- R&TTE
- GCF
- RoHS/WEEE
- CE
- ANATEL
- ACMA
- BABT

+ Additional Features per H24 Model

H24basic

- + Enhanced Audio
- + High-Speed USB 2.0
- + Firmware over-the-air (FOTA)

H24advanced

- H24basic, plus:**
 - ++ Receiver Diversity
 - ++ On-board GPS

H24premium

- H24advanced, plus:**
 - +++ EmbeddedSIM (eSIM)



For more information please visit www.motorola.com/m2m

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