

| | HM03522 [HM03524] | HM02524 | HM02022 [HM02024] | HM01522 [HM01524] | HM01022 [HM01024] | HM0722 [HM0724] |
|-------------------------------------|---|---------------------------|-------------------------------|---------------------------|----------------------|----------------------|
| Vertical | | | | | | |
| Number of Channel | 2 [4] | 4 | 2 [4] | 2 [4] | 2 [4] | 2 [4] |
| Bandwidth | 350 MHz | 250 MHz | 200 MHz | 150 MHz | 100 MHz | 70 MHz |
| Input Impedance | 1 M Ω /50 Ω | 1 M Ω /50 Ω | 1 M Ω /50 Ω | 1 M Ω /50 Ω | 1 M Ω | 1 M Ω |
| V/div. 1 M Ω | 1 mV/div....5V/div. | 1 mV/div....5V/div. | 1 mV/div....10V/div. | 1 mV/div....10V/div. | 1 mV/div....10V/div. | 1 mV/div....10V/div. |
| Max. Input voltage 1 M Ω | 200 Vpk | | | | | |
| V/div. 50 Ω | 1 mV/div....1V/div. | 1 mV/div....1V/div. | 1 mV/div....1V/div. | 1 mV/div....1V/div. | N/A | N/A |
| Probe Attenuation Sense | Standard | | | | | |
| Horizontal | | | | | | |
| Sample Rate per Analog Channel | 2 GSa/s | 1.25 GSa/s | 1 GSa/s | 1 GSa/s | 1 GSa/s | 1 GSa/s |
| Max. Sample Rate | 4 GSa/s | 2.5 GSa/s | 2 GSa/s | 2 GSa/s | 2 GSa/s | 2 GSa/s |
| Memory Depth per Ch. | 2 MPts. | 2 MPts. | 1 MPts. | 1 MPts. | 1 MPts. | 1 MPts. |
| Max. Memory | 4 MPts. | 4 MPts. | 2 MPts. | 2 MPts. | 2 MPts. | 2 MPts. |
| Timebase Accuracy | 15 ppm | 15 ppm | 50 ppm | 50 ppm | 50 ppm | 50 ppm |
| Trigger | | | | | | |
| Trigger Rate | 2500 wfs/s | 2500 wfs/s | 2000 wfs/s | 2000 wfs/s | 2000 wfs/s | 2000 wfs/s |
| Trigger Modes | Edge, Pulse Width, Pattern, Video incl. HDTV, A/B Trigger | | | | | |
| Measurement | | | | | | |
| Cursormeasurement List | ΔV , Δt , $1/\Delta t$ (f), V to Gnd, Vt related to Trigger point, ratio X and Y, pulse count, peak to peak, peak+, peak- | | | | | |
| Parameter List | Frequency, Period, pulse count, V_{pp} , V_{p+} , V_{p-} , V_{rms} , V_{avg} , V_{top} , V_{base} , t_{width+} , t_{width-} , t_{duty+} , t_{duty-} , t_{rise} , t_{fall} , pos. edge count, neg. edge count, pos. pulse count, neg. pulse count" | | | | | |
| HW Counter | 6 Digit | | | | | |
| Advanced Math, Math on Math | Standard | | | | | |
| Math Functions std. | ADD, SUB, 1/X, ABS, MUL, DIV, SQ, POS, NEG, INV, INTG, DIFF, SQR, MIN, MAX, LOG, LN, Filter (low-pass, high-pass) | | | | | |
| Pass/Fail Mask testing | Standard | | | | | |
| Mixed Signal | | | | | | |
| Mixed Signal Functionality | via Option H03508 (8 Channel) or H03516 (16 Channel) | | via Option H03508 (8 Channel) | | | |
| Max. Number of Logic Channel | 16 | 16 | 8 | 8 | 8 | 8 |
| Sample Rate of the Digital Channel | 1 GSa/s | 1,25 GSa/s | 1 GSa/s | 1 GSa/s | 1 GSa/s | 1 GSa/s |
| Memory Depth of the Digital Channel | 1 MPts. | 2 MPts. | 1 MPts. | 1 MPts. | 1 MPts. | 1 MPts. |
| Serial Trigger and Decode | | | | | | |
| I ² C, SPI, UART/RS-232 | H0010 via Analog Channels and/or Logic Channels, H0011 via Analog Channels | | | | | |
| CAN/LIN | H0012 via Analog Channels and/or Logic Channels | | | | | |
| Display | | | | | | |
| Display Size | 6.5 inch | | | | | |
| Display Resolution | 640 x 480 | | | | | |
| Virtual Screen | 20 div. | | | | | |
| Interfaces | | | | | | |
| Monitor Output | Standard: DVI-D | | | | | |
| USB Remote Interface | Standard | | | | | |
| RS-232 Remote Interface | Standard | | | | | |
| Ethernet Remote Interface | Option H0730 | | | | | |
| GPIO Remote Interface | Option H0740 | | | | | |
| Miscellaneous | | | | | | |
| Fan noise | very low | | | | | |
| Dimension (W x H x D) | 28.5 x 17.5 x 22 cm | 28.5 x 17.5 x 22 cm | 28.5 x 17.5 x 14 cm | 28.5 x 17.5 x 14 cm | 28.5 x 17.5 x 14 cm | 28.5 x 17.5 x 14 cm |
| Footprint | 627 cm ² | 627 cm ² | 399 cm ² | 399 cm ² | 399 cm ² | 399 cm ² |
| Weight | 3.6 kg | 3.6 kg | 2.5 kg | 2.5 kg | 2.5 kg | 2.5 kg |
| Power | 70 W max. | 70 W max. | 55 W max. | 55 W max. | 55 W max. | 55 W max. |
| Component Tester | N/A | N/A | Standard | Standard | Standard | Standard |
| Additional Bus Signal Source | Standard | | | | | |
| Languages | German, English, French, Spain | | | | | |

H0010/H0011 Serial Bus

| H0010/H0011 Serial Bus | | | | | |
|------------------------------------|--|---|--|---|--|
| I ² C Bus | | SPI Bus | | UART/RS-232 Bus | |
| Bus Configuration | | | | | |
| Bit/Baud rate | up to 10Mbit/s (HMO352x/2524), up to 5Mbit/s (HMO72x...202x) | up to 25Mbit/s (HMO352x/2524), up to 12.5Mbit/s (HMO72x...202x) | | 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 Baud, up to 62.5Mbit/s (HMO352x/2524), up to 31Mbit/s (HMO72x...202x) | |
| Number of Bit's | 7 or 10Bit for Address ID 8Bit for Data | 32Bit for Data | | 8Bit for Data 1, 1.5, 2Bit for Stop Bit | |
| Polarity | n/a | Chip select, positive or negative, or without Chipselect (2-wire SPI) Clock rising or falling edge Data High or Low active | | High or Low active | |
| Parity | n/a | n/a | | none, odd or even | |
| Trigger | | | | | |
| Source | H0010: digital Channel LCH0...15 [Opt. H03508] analog Channel LCH 1...2 [CH 1...4] H0011: analog Channel LCH 1...2 [CH 1...4] | H0010: digital Channel LCH0...15 [Opt. H03508] analog Channel LCH 1...2, external Trigger Entry for Chip Select, [CH 1...4] H0011: analog Channel LCH 1...2, external Trigger Entry for Chip Select, [CH 1...4] | | H0010: digital Channel LCH0...15 [Opt. H03508] analog Channel LCH 1...2 [CH 1...4] H0011: analog Channel LCH 1...2 [CH 1...4] | |
| Event | 7 or 10Bit Address ID 7 or 10Bit Address ID with 8 Bit Data Start, Stop, Restart missing Acknowledge Address ID without Acknowledge | Data packets up to 32Bit with positive or negative Chip Select or without Chip Select, (2-wire SPI) | | Data packets up to 8Bit | |
| Input format | Hexadecimal or Binary | Hexadecimal or Binary | | Hexadecimal or Binary | |
| Hardware accelerated Decode | | | | | |
| Source | H0010: digital Channel LCH0...15 [Opt. H03508] analog Channel LCH 1...2 [CH 1...4] H0011: analog Channel LCH 1...2 [CH 1...4] | H0010: digital Channel LCH0...15 [Opt. H03508] analog Channel LCH 1...2, external Trigger Entry for Chip Select, [CH 1...4] H0011: analog Channel LCH 1...2, external Trigger Entry for Chip Select, [CH 1...4] | | H0010: digital Channel LCH0...15 [Opt. H03508] analog Channel LCH 1...2 [CH 1...4] H0011: analog Channel LCH 1...2 [CH 1...4] | |
| Display | Bus display, color coded for Read Address ID: Yellow Write Address ID: Magenta Date: Cyan Start: White Stop: White ACK/NACK: Green/Red Error: Red Trigger Condition: Green up to four lines for decoded values, synchronous display of the Bit lines | Bus display, color coded for Date: Cyan Start: White Stop: White Error: Red Trigger Condition: Green up to four lines for decoded values, synchronous display of the Bit lines | | Bus display, color coded for Date: Cyan Start: White Stop: White Error: Red Trigger Condition: Green up to four lines for decoded values, synchronous display of the Bit lines | |
| Format | Address ID: hexadecimal Data ASCII, binary, decimal, hexadecimal | n/a Data ASCII, binary, decimal, hexadecimal | | n/a Data ASCII, binary, decimal, hexadecimal | |

Differences H0010/H0011

| Feature | H0010 | H0011 |
|--|-------|-------|
| Logic channel (LC 0...LC 15) as source for serial bus trigger and decode | x | - |
| Analog channel (CH 1...CH 4) as source for serial bus trigger and decode | x | x |
| Time synchronous decode of two serial busses | x | - |

H0012 CAN/LIN Serial Bus Option

| CAN Bus | | LIN Bus |
|------------------------------------|---|---|
| Bus Configuration | | |
| Bit rates | Pre-Defined or User-Select, 100 Bit/s...4 Mb/s (HM0352x/2524), 100 Bit/s...2 Mb/s (HM072x...202x) | Pre-Defined or User-Select, 100 Bit/s...4 Mb/s (HMO352x/2524), 100 Bit/s...2 Mb/s (HMO72x...202x) |
| Signal Type | CAN-L or CAN-H, Single Ended or Differential Probe (Analog Channel only) | n/a |
| Sample Point Range | 25...90% | n/a |
| Threshold | Pre-Defined or User-Select | Pre-Defined or User-Select |
| Polarity | n/a | High or Low Active |
| Protocol Version | n/a | 1.x, 2.x, J2602, 1.x or 2.x |
| Trigger | | |
| Source | digital Channel LCH 0...15 [Opt. H03508], analog Channel LCH 1...2 [CH 1...4] | digital Channel LCH 0...15 [Opt. H03508], analog Channel LCH 1...2 [CH 1...4] |
| Event | Start of Frame (SOF), End of Frame (EOF) Error Frame Error condition: Stuff Bit Error, CRC Error, Not Acknowledge, Form Error Overload Frame Data Frame (11 or 29 Bit ID) Remote Frame (11 or 29 Bit ID) Identifier: 0, 1, X (Don't Care) Pattern, Trigger when =, ≠, <, > Identifier and Data: ID and 64 Bit data pattern (0, 1, X), trigger when =, ≠, <, > | Start of Frame (SOF), Wake Up Frame Error Frame Error condition: Checksum Error, Parity Error Synchronisation Error Identifier: 0, 1, X (Don't Care) Pattern, Trigger when =, ≠, <, > Identifier and Data: ID and 64 Bit data pattern (0, 1, X), trigger when =, ≠, <, > |
| Input format | Hexadecimal or Binary | Hexadecimal or Binary |
| Hardware accelerated Decode | | |
| Source | digital Channel LCH 0...15 [Opt. H03508], analog Channel CH 1...2 [CH 1...4] | digital Channel LCH 0...15 [Opt. H03508], analog Channel CH 1...2 [CH 1...4] |
| Display Bus | color coded for Start and End of Frame: White brackets Data ID: Magenta, Remote ID: Yellow DLC: White, Data: Cyan, CRC: White ACK: Green, Overload: White, Error: Red up to four lines for decoded values, synchronous display of the Bit lines | color coded for Start and End of Frame: White brackets Break: Magenta, Synchronisation: White Identifier: Yellow, Parity: Green, Data: Cyan Checksum: White, Error: Red, Wake Up: Magenta up to four lines for decoded values, synchronous display of the Bit lines |
| Table | Display of Bus 0 or 1 Frame Number State (Frame Type or Error Description) Start Time, Identifier, DLC, CRC, Data | Display of Bus 0 or 1 Frame Number State (Frame Type or Error Description) Start Time, Identifier, Length, Checksum, Data |
| Format | Identifier & other: hexadecimal Data: ASCII, binary, decimal, hexadecimal | Identifier & other: hexadecimal Data & Checksum: ASCII, binary, decimal, hexadecimal |