MicroHAWK® ID-20 / ID-30 / ID-40 / ID-45
Configuration Guide
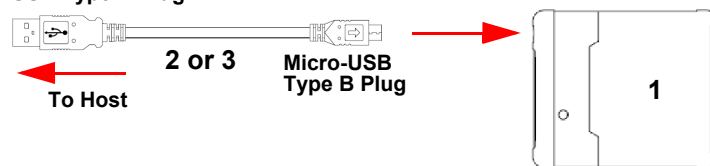
Hardware Required

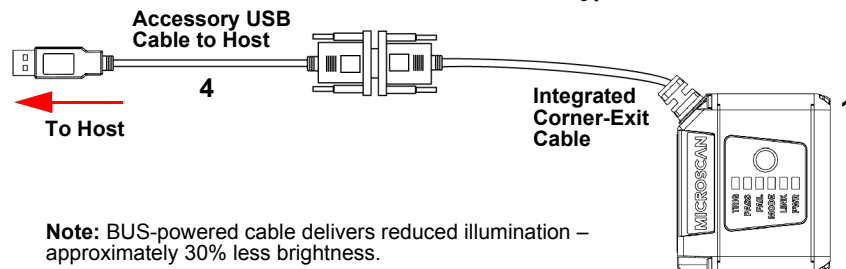| Item	Description	Part Number
1	MicroHAWK ID-20, MicroHAWK ID-30, MicroHAWK ID-40, or MicroHAWK ID-45	7ABX-YZZZ-LPPP
2	Cable, USB A to Micro B, 6 ft., ID-20	61-9000034-01
3	Cable, USB A to Micro B, 3 ft., ID-20	61-9000045-01
4	Cable, DB15 to BUS Power USB Type A, ID-30	61-9000043-01
5	Kit, Cable, DB15 to Ext. Power/RS-232 with Power Supply, ID-30 – includes 97-9000006-01 and 61-9000037-01	98-9000048-01
6	Power Supply, 5V – for use with cables 61-9000037-01 and 61-9000038-01	97-9000006-01
7	Cable, DB15 to Ext. Power/RS-232, ID-30	61-9000037-01
8	Kit, Cable, DB15 to Ext. Power/USB with Power Supply, ID-30 – includes 97-9000006-01 and 61-9000038-01	98-9000049-01
9	Cable, DB15 to Ext. Power/USB, ID-30	61-9000038-01
10	Kit, Cable, DB15 to Ext. Power/USB, I/O with Power Supply, ID-30 – includes 97-000011-02 and 61-9000039-01	98-9000050-01
11	Power Supply, 100-240VAC, +5VDC, 2-Pin U.S./Euro Plug	97-000011-02
12	Cable, DB15 to Ext. Power/USB, I/O, ID-30	61-9000039-01
13	Power Supply, 100-240VAC, +24VDC, TRK 3-Pin, U.S./Euro Plug	97-000012-02
14	IB-131 Interface Box	99-000018-01
15	Converter, IC-332, 24V/5V, Opto I/O – for use with IB-131	FIS-0001-0035G
16	Cable, Communication, DB25 Plug to DB9 Socket, 6 ft.	61-3000026-03
17	Photo Sensor, Visible, NPN, Light On, 5VDC	99-000019-01
18	Cable, DB15 to USB/RS-232, Triggered, ID-30	61-9000102-01
19	Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket	97-000012-01
20	QX-1 Interface Device	98-000103-02
21	Cordset, Common, M12 12-Pin Socket (Screw-On) to M12 12-Pin Plug	61-000162-02
22	Cordset, Host, Ethernet, M12 8-Pin Plug (Screw-On) to RJ45, 1 m.	61-000160-03
23	Photo Sensor, M12 4-Pin Plug, NPN, Dark Off, 2 m.	99-000020-01
24	Photo Sensor, M12 4-Pin Plug, NPN, Dark On, 2 m.	99-9000016-01
25	Cable, M12 12-Pin Socket to 9-Pin Socket and M12 Plug	61-9000054-01
26	Cable, M12 12-Pin Socket to USB Keyboard Wedge and M12 Plug	61-9000088-01

Configurations

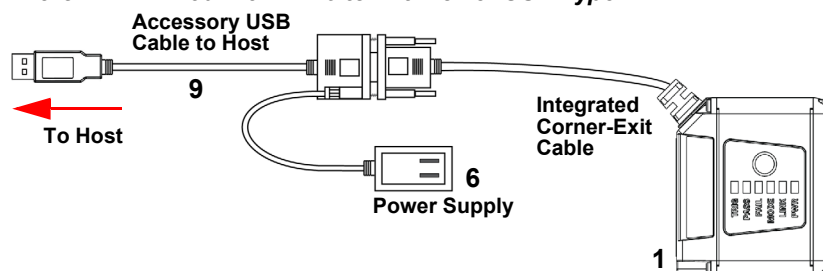### MicroHAWK ID-20 with Micro-USB Type B to USB Type A

USB Type A Plug

2 or 3 **Micro-USB Type B Plug**

To Host

1

MicroHAWK ID-30 with DB15 to BUS Power USB Type A

Accessory USB Cable to Host

4

To Host

Integrated Corner-Exit Cable

1

Note: BUS-powered cable delivers reduced illumination – approximately 30% less brightness.

MicroHAWK ID-30 with DB15 to Ext. Power/USB Type A

Accessory USB Cable to Host

9

To Host

Integrated Corner-Exit Cable

6

Power Supply

1

Configurations (continued)

MicroHAWK ID-30 with DB15 to Ext. Power/RS-232

To host

7

6 Power Supply

Integrated Corner-Exit Cable

1

MicroHAWK ID-30 with DB15 to Ext. Power/USB, I/O

To Trigger

12

Accessory USB Cable to Host

To Power Supply

Integrated Corner-Exit Cable

1
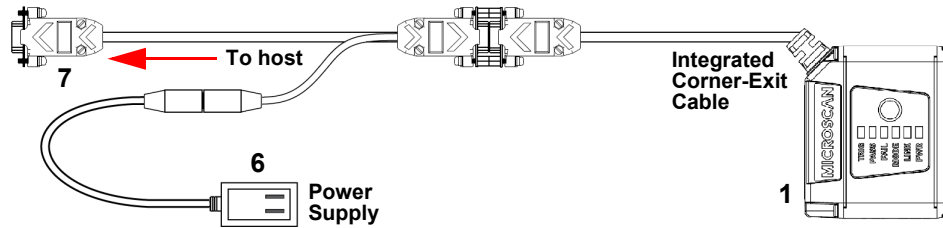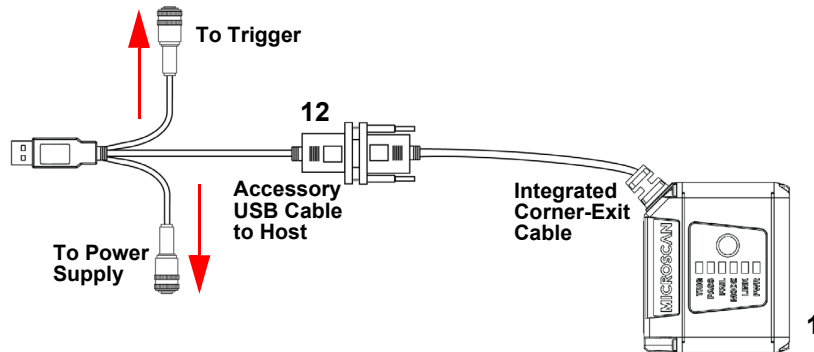
MicroHAWK ID-30 with DB15 to USB/RS-232, Triggered

To Trigger

To Host (USB)

To Power Supply (11)

Accessory USB Cable to Host

18

To Host (RS-232)

Integrated Corner-Exit Cable

1
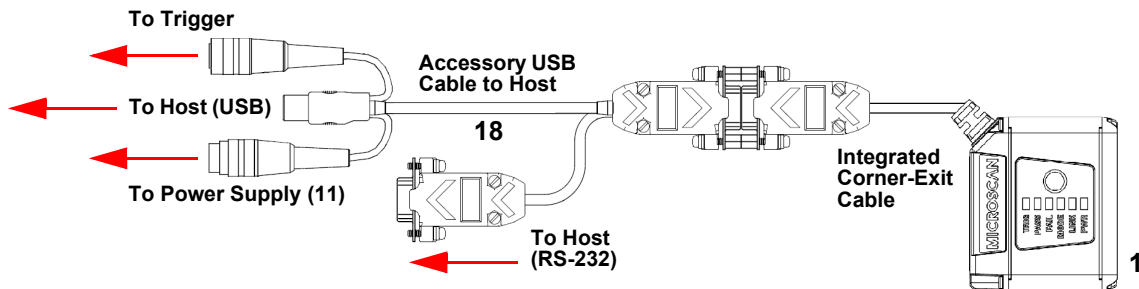
MicroHAWK ID-30 with IB-131 and IC-332

1

IC-332 **15**

16

To Host

IB-131 **14**

To power supply

To external trigger

13 **17**

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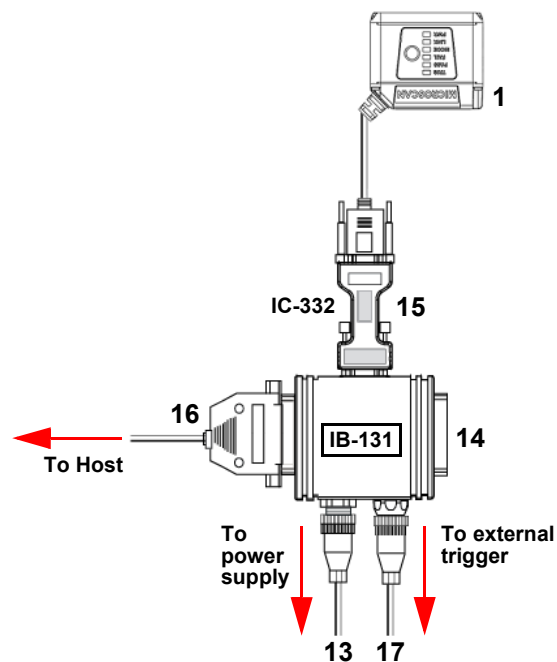
Configurations (continued)

MicroHAWK ID-40 with QX-1 Interface Device

Important: Cabling and hardware configuration for the **MicroHAWK ID-45** is similar to the MicroHAWK ID-40. See the *MicroHAWK ID-40 Specification Sheet* and *MicroHAWK ID-45 Specification Sheet* for more information.

1

21   **22**

Common (12-Pin Plug to 12-Pin Socket)

To Host (Ethernet 8-Pin Plug to RJ45)

20   **1   2**   **QX-1**
         3   T

To Power Supply   **To Trigger**

19   **22 or 23**
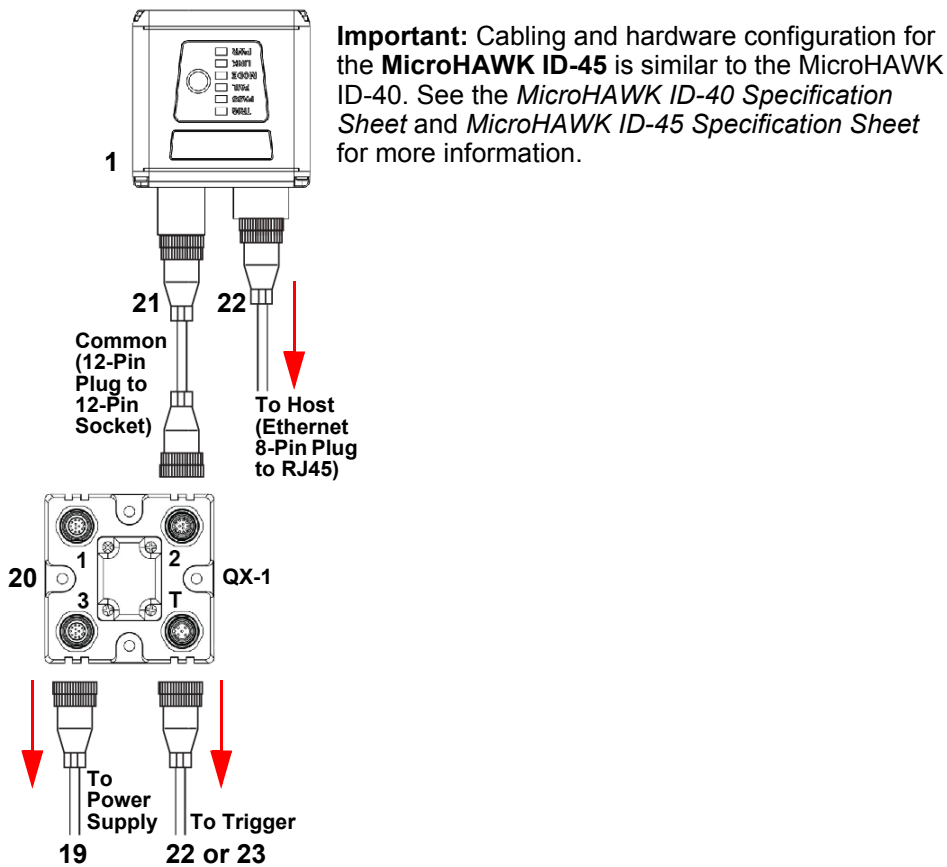
MicroHAWK ID-40 M12 12-Pin Socket to 9-Pin Socket and M12 Plug

To Power Supply (19) or: Flying Lead Cable (61-000167-02); QX-1; MS-Connect 210.

1

25

To Host (RS-232)

To Ethernet
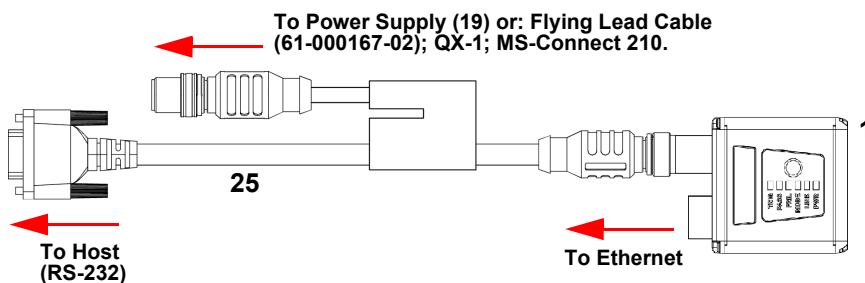
MicroHAWK ID-40 with M12 12-Pin Socket to USB Keyboard Wedge and M12 Plug

To Power Supply (19) or: Flying Lead Cable (61-000167-02); QX-1; MS-Connect 210.

1

26

To Host (USB)

To Ethernet

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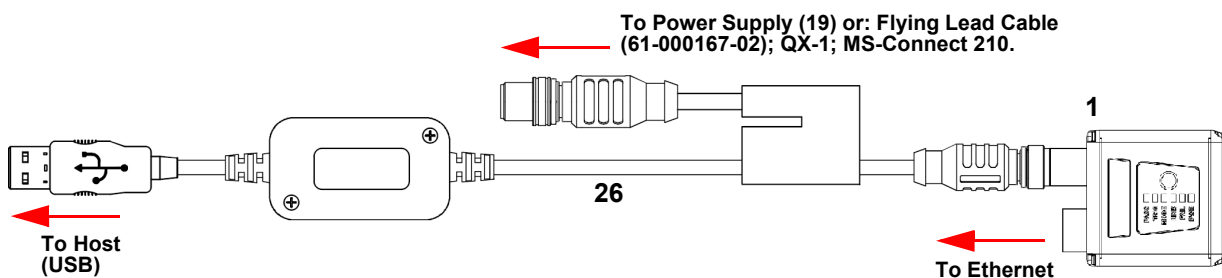
Power Requirements and Pin Assignments

MicroHAWK ID-20: 5 VDC ± 5%, 350 mA @ 5 VDC (typ.)
MicroHAWK ID-30: 5 VDC ± 5%, 600 mA @ 5 VDC (typ.)
MicroHAWK ID-40: 4.75-30VDC, 200mV p-p max ripple, 150mA @ 24VDC (typ.)
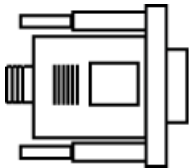**MicroHAWK ID-45:** 10-30VDC, 200mV p-p max ripple, 150mA @ 24VDC (typ.)

Important: *See the MicroHAWK ID-20 / ID-30 / ID-40 / ID-45 User Manual* for information about Omron Microscan's **Isolation Mounting Kit (P/N 98-9000064-01)** to eliminate ground loops or other external electrical noise through your MicroHAWK ID-30, ID-40, or ID-45 reader.

### MicroHAWK ID-20 Micro-USB Type B Socket
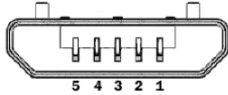
Pin	Function
1	Vbus (5V)
2	D–
3	D+
4	N/C
5	Ground

MicroHAWK ID-40 and ID-45 Connectors

M12 12-Pin Plug

MicroHAWK ID-30 High-Density 15-Pin Dsub USB/Serial Socket

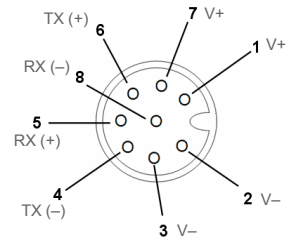| Pin	Function
1	+5VDC
2	TX232
3	RX232
4	GND
5	D+
6	N/C
7	Output 1+
8	New Master+
9	Trigger+
10	D–
11	Output 3+
12	Default+
13	Chassis
14	Output 2+
15	Vbus

Note: An accessory cable is required between the ID-30's 15-pin corner-exit cable and the host's USB port.
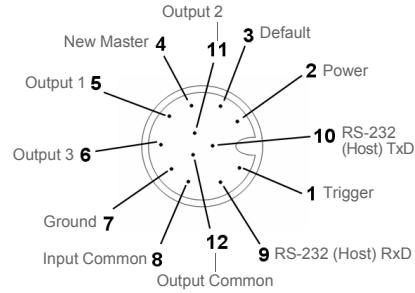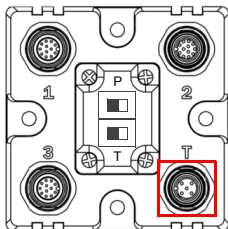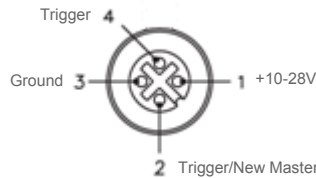

M12 8-Pin Socket (Ethernet)

QX-1 Interface Device – for use with the MicroHAWK ID-40 (Top View)

Connector T on the QX-1 Interface Device is the trigger connector.
Connectors 1, **2**, and **3** can be used to bus power and data as required by the application.

QX-1 Trigger Connector (T) 4-pin Socket

MicroHAWK ID Accessories

MicroHAWK ID-30 Connectivity Kits	
98-9000048-01	Kit, Cable, DB15 to Ext. Power/RS-232 with Power Supply, ID-30 – includes 97-9000006-01 and 61-9000037-01
98-9000049-01	Kit, Cable, DB15 to Ext. Power/USB with Power Supply, ID-30 – includes 97-9000006-01 and 61-9000038-01
98-9000050-01	Kit, Cable, DB15 to Ext. Power/USB, I/O with Power Supply, ID-30 – includes 97-000011-02 and 61-9000039-01 Recommended items (not included with kit): • 99-000019-01, Visible, NPN, Light On, 5VDC • 61-000151-01, Flying Lead Cable
MicroHAWK Power Supplies	
97-9000006-01	Power Supply, 5V – for use with cables 61-9000037-01 and 61-9000038-01
97-000011-02	Power Supply, 100-240VAC, +5VDC, 2-Pin U.S. / Euro Plug
97-000012-01	Power Supply, 100-240VAC, +24VDC, TRK 3-Pin, U.S. / Euro Plug
MicroHAWK Cables	
61-9000034-01	Cable, USB A to Micro B, 6 ft., ID-20
61-9000045-01	Cable, USB A to Micro B, 3 ft., ID-20
61-9000037-01	Cable, DB15 to Ext. Power / RS-232, ID-30
61-9000038-01	Cable, DB15 to Ext. Power / USB, ID-30
61-9000039-01	Cable, DB15 to Ext. Power / USB, I/O, ID-30
61-9000043-01	Cable, DB15 to BUS Power USB, ID-30
61-9000102-01	Cable, DB15 to USB / RS-232 Triggered, ID-30
61-9000054-01	Cable, M12 12-Pin Socket to 9-Pin Socket and M12 Plug
61-9000088-01	Cable, M12 12-Pin Socket to USB Keyboard Wedge and M12 Plug
MicroHAWK Mounting Accessories	
98-000054-01	Kit, Mounting Stand, Base Plate, 6" x 6"
98-9000034-01	Kit, Adapter, MicroHAWK ID-20
98-9000041-01	Kit, L-Bracket, MicroHAWK
98-9000047-01	Kit, 1/4-20 Camera Mount, MicroHAWK
98-9000052-01	Kit, Mounting Stand, MicroHAWK, 4". Base plate not included. Order 98-000054-01 separately.
98-9000053-01	Kit, Mounting Stand, MicroHAWK, 3"
98-9000054-01	Kit, Mounting, APG, MicroHAWK
98-9000059-01	Kit, Adapter Plate, MicroHAWK
98-9000064-01	Kit, Isolation Mounting, M3, MicroHAWK ID-30 / ID-40
98-9000222-01	Kit, Mounting, QX Hawk to MicroHAWK ID-45 Adapter / Isolation Kit
Illumination and Optical Components	
98-9000043-01	Kit, Diffuser, MicroHAWK ID-30 / ID-40
98-9000129-01	Kit, Polarizer, MicroHAWK ID-30 / ID-40
98-9000045-01	Kit, Red LED, MicroHAWK ID-30 / ID-40
98-9000046-01	Kit, White LED, MicroHAWK ID-30 / ID-40
98-9000051-01	Kit, Window, MicroHAWK ID-30 / ID-40
98-9000057-01	Kit, Right-Angle Mirror, MicroHAWK ID-20
98-9000058-01	Kit, Right-Angle Mirror, MicroHAWK ID-30 / ID-40
98-9000217-01	Kit, IR LED, MicroHAWK ID-45
98-9000218-01	Kit, Blue LED, MicroHAWK ID-45
98-9000219-01	Kit, White LED, MicroHAWK ID-45
98-9000221-01	Kit, Diffuser, MicroHAWK ID-45

MicroHAWK ID Part Number Structure

MicroHAWK ID part numbers follow the format **7ABX-YZZZ-LPPP**.

7 = MicroHAWK

Example Part Number: 7432-2000-1005

Description: MicroHAWK ID-45, IP65/67 Case, 24V, Ethernet, SXGA 1.2 Megapixel, Mono, High-Density, Autofocus, Red Outer LEDs, High-Speed, X-Mode Decoder.

(A) Model
1: Engine, No Case, USB
2: ID-20, IP40 Case, USB
3: ID-30, IP54 Case, 5V, USB
4: ID-40, IP65/67 Case, 24V, Ethernet

(B) Software
1: Auto ID
2: (Reserved)
3: ID-45; same IP rating, power, and comm. as ID-40

(X) Sensor
1: WVGA 0.3 Megapixel, Mono
2: SXGA, 1.2 Megapixel, Mono
3: QSXGA, 5 Megapixel, Color

WVGA	752 x 480, 0.3 MP, Mono	Global Shutter	Standard: 10 FPS / High: 60 FPS
SXGA	1280 x 960, 1.2 MP, Mono	Global Shutter	Standard: 10 FPS / High: 42 FPS
QSXGA	2592 x 1944, 5 MP, Color	Rolling Shutter	5 FPS

(Y) Optics
0: Custom
1: Standard-Density
2: High-Density
3: Ultra-High-Density
4: Long-Range (Autofocus Long Range available for SXGA sensor only.)
5: Ultra-High-Density with Polarizer

(ZZZ) Focus Distance
000: Autofocus
050: 50 mm = 1.96 in.
064: 64 mm = 2.51 in.
081: 81 mm = 3.18 in.
102: 102 mm = 4.02 in.
133: 133 mm = 5.23 in.
190: 190 mm = 7.48 in.
300: 300 mm = 11.81 in.
400: 400 mm = 15.75 in. – UHD FF

(L) Outer LED Color
0: N/A (Engine and ID-20)
1: Red (Not available with QSXGA sensor.)
2: White
3: Blue
4: IR

(PPP) Speed and Decoder
000: Standard-Speed, 1D Decoder
001: High-Speed, 1D Decoder
002: Standard-Speed, 1D/2D Decoder
003: Standard-Speed, X-Mode Decoder
004: High-Speed, 1D/2D Decoder
005: High-Speed, X-Mode Decoder

Notes:
- **(A) Model:** The MicroHAWK Engine is available for OEM-certified partners only.
- **(L) Outer LED Color:** Outer LEDs provide extra illumination. Base level illumination included with all readers.
- **(PPP) Speed and Decoder:** 1D omnidirectional decoding functionality is included with all readers. The 1D/2D Decoder option is useful for printed labels. X-Mode is the full decoder package for 1D, 2D, DPM, and damaged symbols.
- **Field Upgrades:** Not available for optics or illumination due to factory settings for optical alignment, LED balancing, and sealing for IP enclosure rating. However, the reader's speed and decoder version are field-upgradeable via licenses.

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