

# Smart Camera

## B50M003

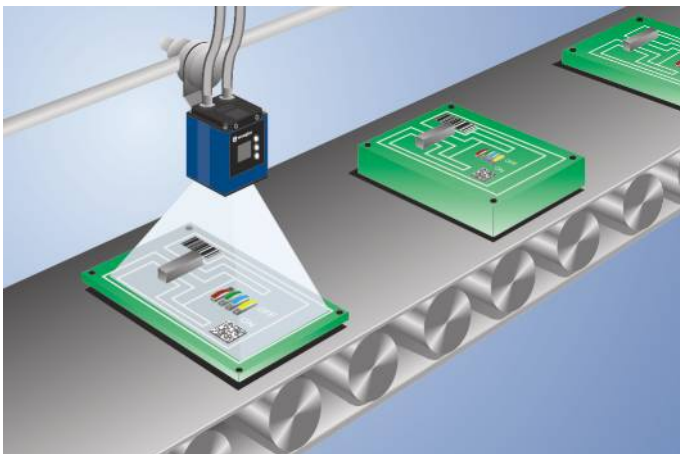
Part Number

weQube



- Image processing functions
- MultiCore technology
- OCR reading
- Pattern matching
- Reading of printed and directly marked 1D and 2D codes

The smart camera weQube is based on the wenglor MultiCore technology and combines the function of the scanner and the vision sensors. Therefore, this product allows to capture all established 1D codes and various 2D code types. Autofocus, region of interest and tracking ensure reliable and stable image recording. The following image processing modules are available: Dimensional accuracy check, sorting procedures, presence control, object counting, position output, pixel counting, optical character recognition, pattern matching, filter options, and statistics evaluation.



### Technical Data

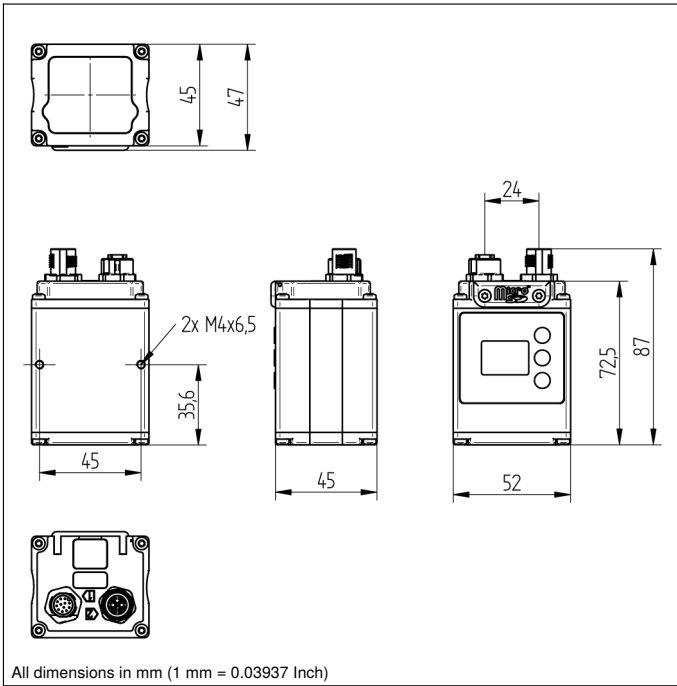
Optical Data	
Working Range	≥ 20 mm
Resolution	736 × 480 Pixel
Resolution	0,35 MP
Focal distance	6,4 mm
Image Chip	monochrome
Image chip size	1/3"
Pixel Size	6 × 6 μm
Light Source	Infrared Light
Optics	Auto-focus
Risk Group (EN 62471)	1
Visual Field	see Table 1
Frame rate (fullframe)	25 fps
Minimum object distance	20 mm
Environmental conditions	
Temperature Range	-25...55 °C*
Atmospheric humidity	5...95%, non-condensing
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 200 mA
Inputs/Outputs	6
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Interface	RS-232/Ethernet
General protocols	FTP
General protocols	RS-232
General protocols	TCP/IP
General protocols	UDP
Protection Class	III
Mechanical Data	
Housing Material	Aluminum, powder-coated
Housing Material	Plastic, ABS
Housing Material	Plastic, PA6-GF30
Degree of Protection	IP67
UL Enclosure Type	1
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.
Optic Cover	Plastic, PMMA
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	230,41 a
Function	
Presence Check	yes
Pixel Comparison	yes
Reference Image Comparison	yes
Tracking	yes
OCR	yes
Object detection	yes
Dimensional accuracy check	yes
1D and 2D code reading	yes
Pattern matching	yes
Web server	yes
License package	weQube - Die Smart Camera

PNP NO

Display brightness may decrease with age. This does not result in any impairment of the sensor function.

\* -25 °C: Ambient conditions should not result in condensation; avoid the formation of ice on the front panel!

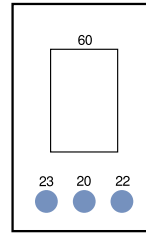
55 °C: Continuous illumination at max. 1% or flash mode at 100% brightness with an exposure time of ≤ 5 ms; may affect the service life of the product.



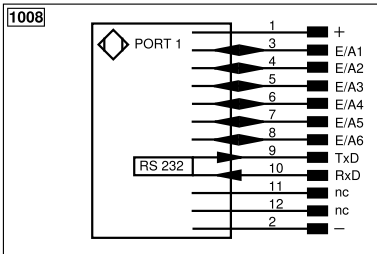
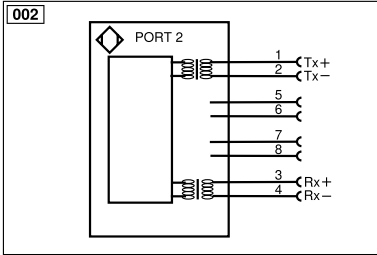
All dimensions in mm (1 mm = 0.03937 Inch)

## Ctrl. Panel

X2



20 = Enter key  
 22 = Up key  
 23 = Down key  
 60 = display



Legend					
+	Supply Voltage +	nc	Not connected	EN <sub>RS422</sub>	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	EN <sub>b</sub>	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
V̄	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link		Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN <sub>RS422</sub>	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	EN <sub>RS422</sub>	Encoder A/Ā (TTL)		

Table 1

Working Distance	20 mm	100 mm	200 mm
Visual Field	9 x 6 mm	65 x 42 mm	134 x 87 mm

