RUTRONIK EMBEDDED

TechTalk

HOLITECH Europe

Displays and General Market Information

Thomas De Laar

Michael Haedecke

HOLITECH Europe
Make information happen.

Holitech Europe GmbH

Embedded World Digital

Mono Displays, TFTs, Camera Modules & ePaper Products

Holitech Europe - Introduction

Holitech Europe GmbH

Klaus-Bungert-Straße 5a
40468 Düsseldorf
Germany

Office

Located in a new building, offering efficient working areas, modern architecture and excellent national and international traffic connections.

A Holitech Group Company

Displays, ePaper, CCM and other solutions for the *Automotive, Medical* and *Industrial* markets.

Dedicated European support team

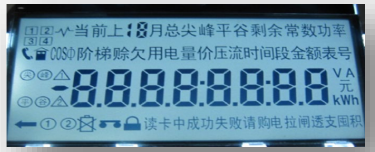
- Sales
- Marketing
- Technical Support
- Supply Chain
- Logistics
- Quality

Monochrome Display Solutions

- Positive (normally-white) and negative (normally-black) mode
- Reflective, transflective and transmissive
- Multicolor printing
- With or without backlight
- Wide-temp, automotive grade,
  Op: -30~85degree, St:-40~90 degree
- Unusual shapes, round edges
- Glass size thickness: 1.1, 0.7, 0.55, 0.50 and 0.4mm

All Technologies

- TN
- HTN
- ETN
- STN
- FSTN
- DFSTN
- ESTN
- ASTN
- DSTN
- EBN

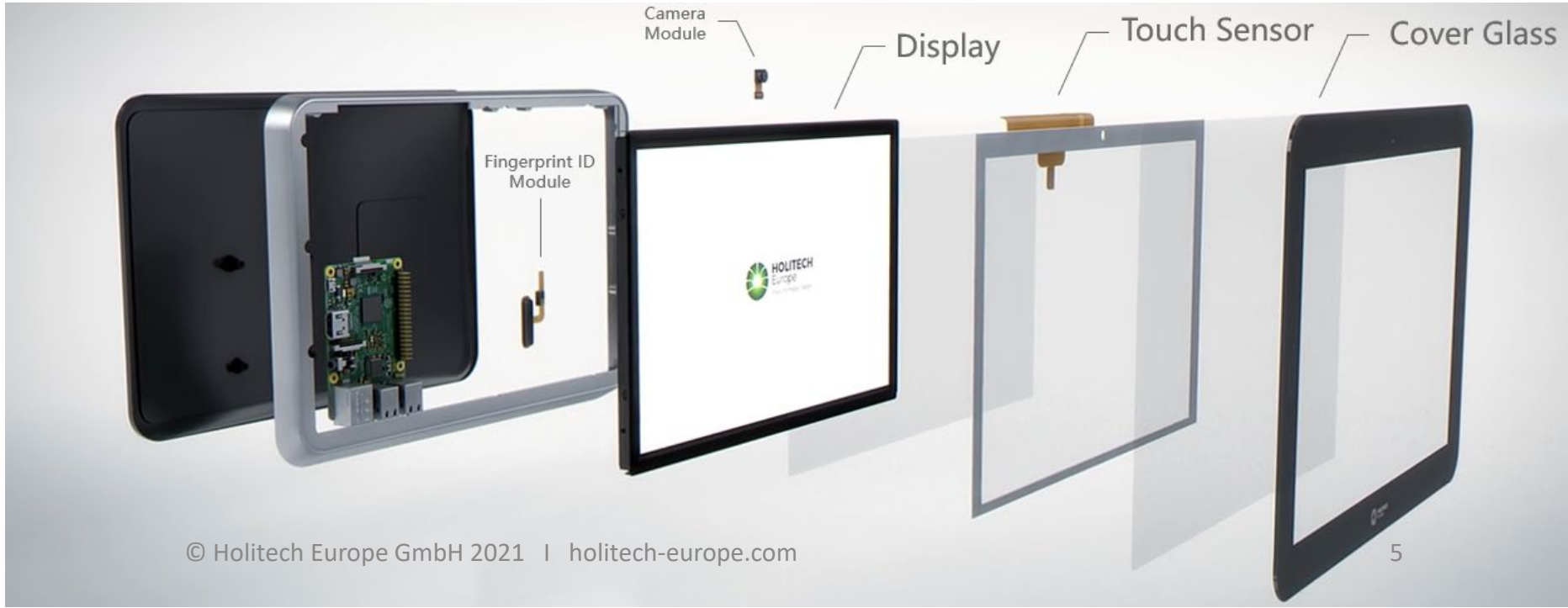


TFT Solutions

- Standard sizes 1.44” - 15.6”
- Designed by customer requirements (viewing angles, optical compensation, backlight, brightness interconnect, slimming etc.)
- 16:9/18:9 display screen with different resolution
- TN, VA, IPS, FFS , LTPS etc. technologies
- MIPI / USB / RGB interface

Complete LCD-Modules

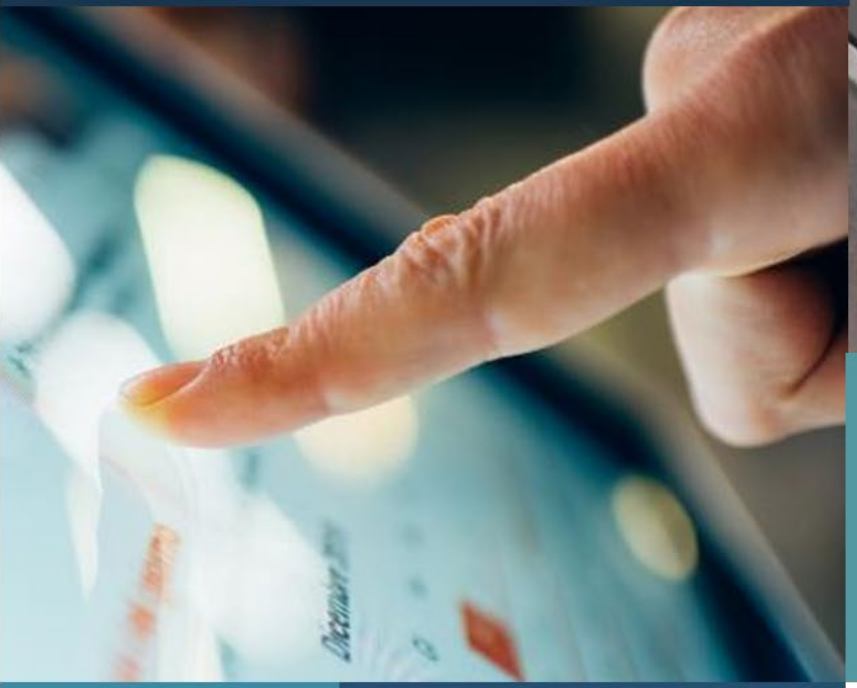
- TFT
- Back Light
- Cover Glass
- Touch Panel
- Camera Module
- Fingerprint Module
- Housing
- FPC
- AG, AR, AF Treatment



Touch Solutions

HOLITECH Europe
Make information happen.

single and multi-point touch, up to
40 touches

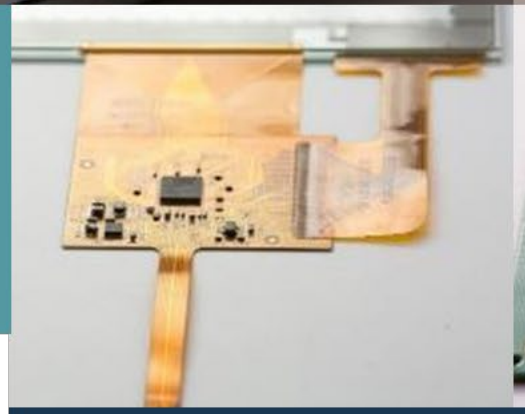


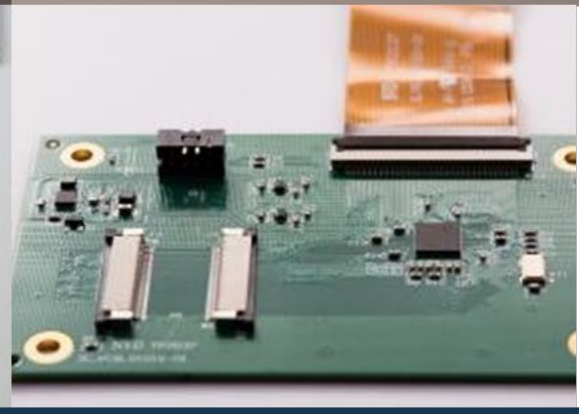
1 to 65” Diagonal
(up to 43” film sensors)

bonding to display
optical bonding using liquid glue
standard bonding with air gap using DST

bonding to cover lens
using liquid glue or film OCA

wide range of controllers supported including
Atmel® maXTouch®
(Stand-alone sensors with or without controller also available)





PET film and glass based substrates

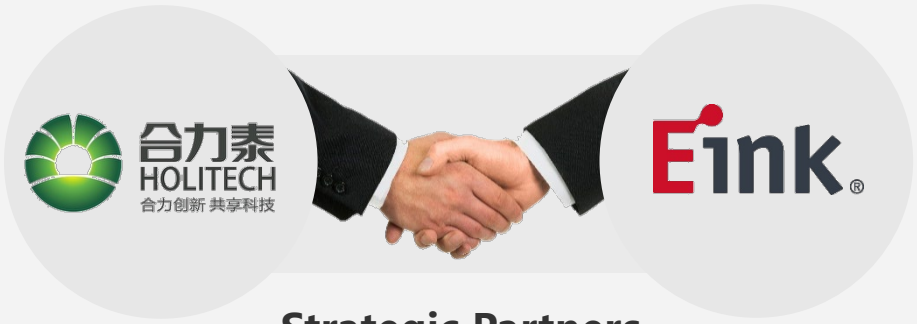
SITO, DITO, OGS
single and dual-layer glass stacks,
single and dual-layer film stacks

MICROCHIP Atmel CYPRESS FocalTech ZINITIX GOODIX Sitronix

COB and COF designs

H-INK ePaper Display Solutions

HOLITECH Europe
Make information happen.



Strategic Partners
Strong cooperation between HT and E-INK in order to promote solutions for ESL, Smart Home, Intel. Retail, Intel. Storage & Intel. Logistics

Advantages	Disadvantages
+ Sunlight viewing ability + Low power consumption + 180° viewing angle + Paper-like feeling + Good for vision health + Strong black-white-contrast ratio	– Slower response time – Slower switching speed – Narrow temperature range

© Holitech Europe GmbH 2021 I holitech-europe.com

H-INK ePaper Display Solutions

Dot-Matrix Displays

- Intended when many forms of text and images are required
- Displays comprise large array of pixels (controlled by TFT)
- Holitech offers a range of standard products for 1.3” up to 31.2” with a wide variety of resolutions
- Most of the sizes are available in:
  - Black White
  - Black White Red
  - Black White Yellow
  - Low Temperature (below 0°C)
- Available colors
  - BW, BWR, BWY, WBL, WGR
  - More colors to come

Segmented Displays

- Intended for applications with predefined segments
- Mostly customized solutions

Black-White-Red EPD

Segmented Black-White EPD

© Holitech Europe GmbH 2021 I holitech-europe.com

H-INK ePaper Display Solutions

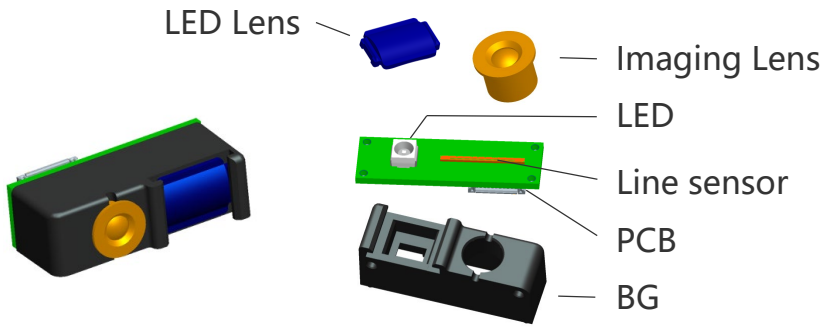
- No MOQs for standard displays
- Samples as well as demo boards available
- Short lead times
- Possibility to add CTP starting from 10kpcs/year
- Possibility to offer products with a frontlight (White or RGB)
- Huge production capacity (up to 5kk/month)

Partial Refreshes on a Dot-Matrix EPD

Electronic Shelve Label (ESL)
(Partial and Full Refreshes on a DOT-Matrix EPD)

Camera Module Solutions

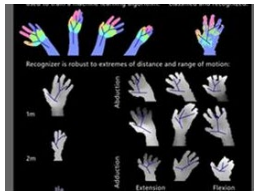
- Fully customized CCM (Lens, FPC, Interface)
- COB / CSP resolution
- Wide FOV (120 degree)
- Single/Dual camera
- Fixed / Auto focus / LED aimer
- VGA/2M/3M/5M … 13M/21M with FF/AF/PDAF/OIS series



Scanner Camera Module

Typical Appliances

TV video chat

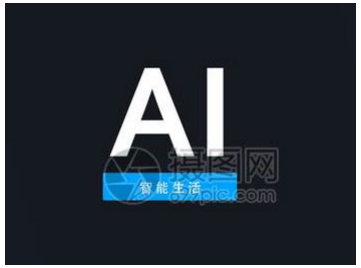


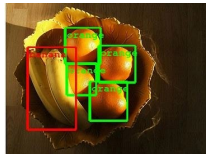
Gesture recognition

Smart fridge

Face recognition

Smart air conditioner





Object recognition

Scanner

Microwave oven

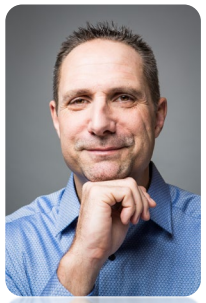
Smart oven

Display Market Situation

- The IC and Panel markets are currently facing a material and production capacity shortage.
- Lead times of IC Drivers have increased up to 20 weeks or longer.
- Price increases up to 30% and higher
- This challenging market situation will remain within 2021.

! To be able to ensure reasonable delivery times, detailed forecasts and early placed orders are necessary. !

THANK YOU!



Thomas de Laar

Managing Director
M +49 151 18851591
E thomas.delaar@holitech-europe.com

Michael Haedecke

Business Development Manager
M +49 151 18851582
E michael.haedecke@holitech-europe.com